Subject: Interview - ÉPOCA magazine (Brazil)
From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 12:06:46 -0300
To: <rruedy@giss.nasa.gov>

Dear Dr. Reto Ruedy,

I am a journalist from ÉPOCA, a Brazilian weekly magazine, and I am getting in contact to you following Mrs. Leslie McCarthy indication.

I am working on an article about the data correction made by Nasa at U.S. temperature tables and I would like to clarify some few points about this issue.

- What is the meaning of this correction? It is being said that it could raise questions about the trustability of the studies realeased about global warming. What is Nasa's official position towards it?

- Does Nasa intend to go public to explain more about the data correction?

- Is the global warming theory in risk because of this correction?

- Do you believe that this correction could be used for political purposes?

Dr. Reto, I am sending the questions to you via e-mail because I think it would be easier for you to answer (considering that my deadline is today) but I can call you if you prefer.

Thank you very much,

I look forward to hearing from you soon,

Best regards,

Letícia
Letícia Sorg
Assistant Editor - ÉPOCA magazine
revistaepoca.globo.com
) 55 (11) 3767-7084 (office)
(mobile)
1 lsorg@edglobo.com.br

Subject: RES: Interview - ÉPOCA magazine (Brazil)
From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 13:18:45 -0300
To: <rruedy@giss.nasa.gov>

Dear Dr. Reto,

I have just read your e-mail and I think that it is really clear about the implications (or lack of them) of this correction.
But I would like to ask you just two specific points, that I think that are still interesting even with your explanation:
1) Do the Nasa intend to go public to clarify this case and provide media and society with an official statement?
2) Other question raised by this case is about the differences among American temperature stations and the used in other countries. It's being said that American stations are mostly at rural areas, which suffered less temperature variation than the cities. Is it correct?

Thank you very much, once more,
Best regards,
Letícia

De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Enviada: qua 15/8/2007 12:55
Para: Letícia Francisco Sorg - Redação Época - Editora Globo
Assunto: Re: Interview - ÉPOCA magazine (Brazil)

Dear Leticia,

Just quick: Our emails crossed. Maybe my note answered all questions; if not I will write you again after carefully reading your mail.

Reto

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Reto Ruedy <rruedy@giss.nasa.gov>

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winmail.dat	**Content-Type:** application/ms-tnef **Content-Encoding:** base64

Subject: U.S. warmest years
From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 14:03:26 -0300
To: <rruedy@giss.nasa.gov>

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The last point I would like to ask you is concerning the ranking of the warmest years in U.S.
I have organized the data from the previous and the correct table of temperatures and I got to this ranking:

Previous table

1º	1934
1º	1998
2º	1921
3º	1931
4º	2005
5º	1999
6º	2001
7º	1953
8º	1990
9º	1987

Revised table

1º	1934
2º	1998
3º	1921
4º	2006
5º	1931
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As I've pointed in red, two years from 30's entered in the ranking of 10 warmest years in U.S.. Considering this change, would it be possible to say that the planet is becoming hotter and hotter?

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From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 15:01:27 -0300
To: <rruedy@giss.nasa.gov>

Dear Dr. Ruedy,

I am writing just to check if you had received my last message with the comparison of the two tables of temperature.
Thank you
Best regards

Letícia

De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Enviada: qua 15/8/2007 13:57
Para: Letícia Francisco Sorg - Redação Época - Editora Globo
Assunto: Re: RES: Interview - ÉPOCA magazine (Brazil)

On Wed, 2007-08-15 at 13:18 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

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> 1) Do the Nasa intend to go public to clarify this case and provide media and society with an official statement?

Yes - what NASA would like to do is to use the media attention as an opportunity to educate the public about a truly serious situation. Exactly how they will do so - given the tiny size of the molehill that was blown up to enormous proportions - I don't know.

When in our January US table 1998 and 1934 changed places (in all our previous tables and publications US-1934 slightly beat US-1998) nobody noticed or cared about that change, much less made any kind of official statement. So why should we have to do it now ?

Small programming errors are made and corrected all the time; the one I made in 2000 was not the only one (like all other programmers, I make many mistakes every day - debugging usually finds them, but errors that have only small effects can survive for years).

> 2) Other question raised by this case is about the differences among American temperature stations and the used in other countries. It's being said that American stations are mostly at rural areas, which suffered less temperature variation than the cities. Is it correct?

One criticism that some people brought up was that weather stations near growing cities show rising temperature since the urbanization contributes a warming that would not be felt further away from the urban center.

This question was taken seriously, analyzed, it's effect compared to the margin of error and found to be of similar size to the margin of error. Nevertheless, we use an adjustment that makes the time series of urban stations behave exactly like the mean of the neighboring rural stations. If an urban station does not have neighboring rural stations, we do not use its data.

In spite of all this effort, the global warming deniers cling steadfastly to that effect.

Our analysis treats all stations the same way independent in which country they are located.

Reto

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winmail.dat	**Content-Type:** application/ms-tnef **Content-Encoding:** base64

Subject: Previous table
From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 15:10:35 -0300
To: <rruedy@giss.nasa.gov>

Deard Dr. Ruedy, here it's the previous table I used for the comparison. If you could check if I'm using a correct base, it would be great.
Thank you
Letícia
Contiguous 48 U.S. Surface Air Temperature Anomaly (C)

year	Annual_Mean	5-year_Mean
DADOS ORIGINAIS		
1880	-.41	.13
1881	.15	-.14
1882	-.04	-.34
1883	-.70	-.36
1884	-.73	-.44
1885	-.50	-.48
1886	-.25	-.39
1887	-.21	-.19
1888	-.28	-.05
1889	.28	-.04
1890	.23	-.10
1891	-.24	-.17
1892	-.47	-.21
1893	-.66	-.39
1894	.11	-.31
1895	-.69	-.24
1896	.17	-.14
1897	-.12	-.25
1898	-.17	.00
1899	-.43	-.02
1900	.54	-.01
1901	.07	-.11
1902	-.09	-.11
1903	-.65	-.31
1904	-.41	-.34
1905	-.47	-.37
1906	-.06	-.21
1907	-.22	-.18
1908	.11	-.02
1909	-.25	.01
1910	.31	-.12
1911	.11	-.17
1912	-.89	-.11
1913	-.13	-.21
1914	.03	-.33

1915	-.16	-.36
1916	-.51	-.32
1917	-1.00	-.36
1918	.02	-.42
1919	-.15	-.10
1920	-.45	.12
1921	1.08	.10
1922	.11	-.01
1923	-.09	.15
1924	-.70	-.05
1925	.38	-.04
1926	.04	-.01
1927	.16	.02
1928	.05	-.03
1929	-.54	.16
1930	.11	.12
1931	1.00	.24
1932	-.01	.60
1933	.66	.58
1934	1.24	.42
1935	.05	.40
1936	.18	.43
1937	-.12	.34
1938	.78	.34
1939	.80	.41
1940	.04	.45
1941	.54	.32
1942	.07	.18
1943	.16	.17
1944	.09	.20
1945	-.01	.20
1946	.67	.15
1947	.09	.17
1948	-.08	.13
1949	.18	-.08
1950	-.23	-.04
1951	-.38	.15
1952	.30	.28
1953	.88	.31
1954	.82	.44
1955	-.05	.41
1956	.28	.25
1957	.14	.12
1958	.07	.09
1959	.16	.03
1960	-.22	.00
1961	.00	.02
1962	-.02	-.03
1963	.19	.00

1964	-.08	-.05
1965	-.12	-.07
1966	-.24	-.16
1967	-.10	-.19
1968	-.27	-.19
1969	-.23	-.16
1970	-.12	-.22
1971	-.10	-.11
1972	-.36	-.04
1973	.25	-.05
1974	.15	-.08
1975	-.20	.07
1976	-.23	-.09
1977	.36	-.23
1978	-.51	-.15
1979	-.58	.03
1980	.22	-.12
1981	.65	-.01
1982	-.36	.10
1983	.01	-.02
1984	.01	-.01
1985	-.41	.23
1986	.73	.30
1987	.84	.26
1988	.33	.52
1989	-.17	.51
1990	.88	.41
1991	.69	.26
1992	.31	.38
1993	-.43	.28
1994	.47	.10
1995	.35	.05
1996	-.18	.38
1997	.05	.48
1998	1.24	.54
1999	.94	.55
2000	.65	.88
2001	.89	.76
2002	.67	.68
2003	.65	.75
2004	.54	*
2005	.99	*

em seguida. Quaisquer opiniões ou informações expressadas neste e-mail pertencem ao seu remetente e não necessariamente coincidem com aquelas da Editora Globo.

Subject: RES: U.S. warmest years
From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 15:15:53 -0300
To: <rruedy@giss.nasa.gov>

Dear Dr. Ruedy,

Thank you very much for your explanation. But could we say that the temperature increasing rate is getting bigger in the last decades? It's being publicized that the the global temperatures are increasing at a rate of 0,2°C per decade in the last to decades, compared to a rate of less than 0,1 °C per decade in the beginning of the 20th Century.
Is this correct?
Thank you,
Sincerely

-----Mensagem original-----
De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Enviada em: quarta-feira, 15 de agosto de 2007 15:08
Para: Letícia Francisco Sorg - Redação Época - Editora Globo
Assunto: Re: U.S. warmest years

Dear Leticia,

I agree with your revised table; I don't know where your previous table comes from (I'll look into that).

To answer your question, given the existing sampling error (.1-.2C):

No - we cannot draw any conclusions about our planet from the US data (much less from the rankings you show below):

The US has been warming in the period 1980-2006 similarly to the period from 1920-1934; that earlier 15-year period then was followed by a cooling period and the same might be true for the current 25-year period. The annual US-mean changes are still large compared to any CO2 effect.

However, the global means show a totally different picture (global mean year-to-year changes being much smaller than US-mean year-to-year changes); and whereas no scientist, as far as I know, could make a convincing argument for an extended warming period in the US in 1920-1934, our 1982 model runs showed that the effect of CO2 should become noticeable in the global means within the next 2-4 decades. And sadly, the global (not the US) data now available showed that model was, if anything, underestimating the effect.

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From: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>
Date: Wed, 15 Aug 2007 16:21:28 -0300
To: <rruedy@giss.nasa.gov>

Mr. Ruedy,
I would like to thank you once more the personal attention you have given to my magazine.
It will be great to have your opinions on the article.
I would like just to check with you how I can present you at the article. Nasa's scientist responsible for software?
Thank you very much
Best regards
Letícia

-----Mensagem original-----
De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Enviada em: quarta-feira, 15 de agosto de 2007 15:56
Para: Letícia Francisco Sorg - Redação Época - Editora Globo
Assunto: Re: RES: U.S. warmest years

Dear Leticia,

This is even more speculative, some people still try to deny in spite of the data that it is warming at all. To observe that the warming accelerates would take even longer observation times, another 50-100 years.

It would be bad enough if it keeps increasing at the current rate of .2C/decade as it has since 1980. It briefly increased at almost that rate in the 1915-1945 period but then it stayed even or even decreased a little til about 1980. The period from 1880-1920 was a period of basically constant global temperatures.

Again, the frightening thing about today's temperature rise is that it was predicted 25 years ago based on solid physics. So chances are it will not stop until we deal with the cause of it ! The good thing is that we know the cause, and we could use that knowledge if people just paid attention to the experts rather than to the bloggers.

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> 6°
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> 8°

1990
9°
1987

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1°
1934
2°
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3°
1921
4°
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Reto Ruedy <rruedy@giss.nasa.gov>

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Subject: Re: Fwd: FW: <no subject>
From: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>
Date: Tue, 14 Aug 2007 12:41:58 -0400
To: jhansen@giss.nasa.gov

Jim, I'm afraid your note doesn't clarify things. This part makes no sense:

"Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record." The year 1934 isn't on NASA's previous list of the five warmest years, as Volz notes. It does, indeed, look as if "suddenly 1934 has become the warmest U.S. year."

Also: Critics say you've refused to share the algorithm used to generate your graph data. Why haven't you? And might the flaw have been spotted sooner if the public had been able to inspect it?

Feel free to call if that's easier.

Best,
Demian
202.624.1864

----- Original Message -----
From: James Hansen <jhansen@giss.nasa.gov>
At: 8/14 12:15:10

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Date: Tue, 14 Aug 2007 12:48:42 -0400
To: jhansen@giss.nasa.gov

james, pardon me: i see the records volz was referring to are ***global***. the u.s. figures showed 1998 as the warmest year. nevertheless, nasa has indeed newly ranked 1934 as the warmest year. also, i'd be grateful if you could respond to the second question, regarding your algorithm and making it public.

best,
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Thanks, James. I'm not familiar with that paper from 2001. Is it not true, though, that NASA's rankings, as available at:

http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

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Yes, our analysis algorithm is available, described fully in publication, and other researchers have taken that description, applied it to the raw data and come up with the same results that we get.

Jim

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Attachment Converted: "c:\program files\qualcomm\eudora\attach\10222728.HTM"

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see in our 2001 paper we found 1934 slightly warmer, by an insignificant hair over, 1998. We still find that result. The flaw affected temperatures only after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication, and other researchers have taken that description, applied it to the raw data and come up with the same results that we get.

Jim

On 8/14/07, **DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:** <dmclean8@bloomberg.net> wrote:

james, pardon me: i see the records volz was referring to are *global*. the u.s. figures showed 1998 as the warmest year. nevertheless, nasa has indeed newly ranked 1934 as the warmest year. also, i'd be grateful if you could respond to the second question, regarding your algorithm and making it public.

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Subject: Re: Fwd: FW: <no subject>
From: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>
Date: Tue, 14 Aug 2007 15:47:42 -0400
To: jhansen@giss.nasa.gov

Jim, thanks for putting me in touch with Reto. Can you point me to a thorough description of how your analysis algorithm works?

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From: James Hansen <jhansen@giss.nasa.gov>
At: 8/14 13:00:38

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see in our 2001 paper we found 1934 slightly warmer, by an insignificant hair over, 1998. We still find that result. The flaw affected temperatures only after 2000, not 1998 and 1934.

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Attachment Converted: "c:\program files\qualcomm\eudora\attach\102227281.HTM"

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Subject: Re: Fwd: FW: <no subject>
From: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>
Date: Tue, 14 Aug 2007 14:06:39 -0400
To: rruedy@giss.nasa.gov

Thanks for the quick reply, Reto.
----- Original Message -----
From: Reto Ruedy <rruedy@giss.nasa.gov>
At: 8/14 13:58:38

Jim,

The US plots and figures are not part of the standard analysis; once a year (in January) we create them in a separate step.

In the last posting visible to the public (done in Jan 2001) of the US annual temperature plot 1998 was indeed a little warmer than 1934. In order to notice that, you had to go to the plot and click on table data. As far as I know, nobody at GISS noticed that fact or gave it a second thought.

The next update was due in Jan 2008. Had we updated this figure every month, then due to late US station reports, at some point that ranking would have changed back to 1934 "beating" 1998. My guess is that it would have been in February for the following reason:

Ken downloads the GHCN data repeatedly until he sees some US stations included - they always seem to come in a day or 2 later than most other data. As you know, particularly in January there is pressure to do the update as soon as possible; so it is very likely that his final download in January did not include all US stations yet.

I of course wanted to see the impact of the correction only, hence I did the same analysis for the latest data with and without the correction. In both cases, as you reported, US-1934 was slightly warmer than US-1998.

Hope that clears it all up.

Reto

On Tue, 2007-08-14 at 13:27 -0400, James Hansen wrote:
> Makiko, Reto, could you please clear this up. Other people keep saying the same thing that Demian does, i.e., that we previously claimed that 1998 was warmer than 1934. Is that right? I am quite sure that our 2001 paper shows 1934 slightly warmer, as we still find. Of course, scientifically this is all nonsense, as the difference of 0.02 is much less than the accuracy, so practically it should be stated as a tie. I know that whenever new stations are added to the record it can change things by small amounts. Did we once find 1998 as warmer??? Jim (I will be away from e-mail for a few hours).
>
> On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:
> <dmclean8@bloomberg.net> wrote:
>> Thanks, James. I'm not familiar with that paper from 2001. Is it not true,
>> though, that NASA's rankings, as available at:
>>
>> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
>>
>> now show 1934 as the hottest year, where 1998 used to hold

that position?

thanks,
demian
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From: James Hansen <jhansen@giss.nasa.gov>
At: 8/14 13:00:38

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see
in our 2001 paper we found 1934 slightly warmer, by an insignificant hair
over, 1998. We still find that result. The flaw affected temperatures only
after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication,
and other researchers have taken that description, applied it to the raw
data and come up with the same results that we get.

Jim

On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:
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> From: James Hansen <jhansen@giss.nasa.gov>
> At: 8/14 12:15:10
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> > Don Anderson
> > 3G84
> > Modeling, Analysis and Prediction (MAP)
> > Earth Science Division
> > Science Mission Directorate
> > NASA HQ
> > Washington, DC, 20546-0001
> > 202-358-1432 Fax: x2770
> > email: Donald.Anderson-1@nasa.gov
> >
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> > *Date: *Mon, 13 Aug 2007 12:01:06 -0400
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> > *Cc: *"Kaye, Jack A. (HQ-DK000)" < jack.a.kaye@nasa.gov>,
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> > (HQ-NB060)" < dwayne.c.brown@nasa.gov>
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Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <donald.anderson-1@nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Leslie McCarthy <lnolan@giss.nasa.gov>

Don,

These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2000 and later, and only the United States.

The flaw, even when present (in 2000-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.

Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S. (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.

Jim

*The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected, and it has been corrected.

On 8/13/07, Donald Anderson <donald.anderson-1@nasa.gov > wrote:

> Jim:
> FYI

Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <hal.maring@nasa.gov >
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.
>
> Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.
>
> The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century – 2000, 2002, 2003, 2004 – plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of

America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

American climate data so much better he's not

Subject: Re: edited version
From: Darnell Cain <dcain@giss.nasa.gov>
Date: Thu, 16 Aug 2007 16:01:29 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, rruedy@giss.nasa.gov

Hi Jim,

Just finished reading the updated version for minor stuff and ran into the following items. -Darnell

1) Page 1, line 4 ==> Move period inside quotes (Bedford style guide) for the line "don't make a federal case out of it"

2) Page 1, para 2, line 4 ==> A period after http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf, before "The flaw..."

3) Page 1, [bracketed] para 3, line 11 ==> Should USHCH be USHCN?

4) Page 1, para 4, line 3 ==> affect should be effect? in the line "Does this change have any..."
" " ==> should "whatever" be whatsoever?

5) Page 4, para 2, line 2 ==> move comma inside quotes? For line "Implications of this rapid..."

6) Page 5, para 2, line 3 ==> move comma inside quotes? For line "...about 50 years from now". We can't..."

At 03:10 PM 8/16/2007, you wrote:

> I made several edits improvements, included here, while reading the second half. Jim
> Content-Type: application/msword; name=RealDeal.16Aug2007.doc
> X-Attachment-Id: f_f5fmmc4s
> Content-Disposition: attachment; filename="RealDeal.16Aug2007.doc"

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces global temperatures at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001) http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf The flaw affected temperatures only in the United States (by about 0.15°C) and only in 2000 and later. We corrected the flaw in the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf one improvement made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program presumed that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they

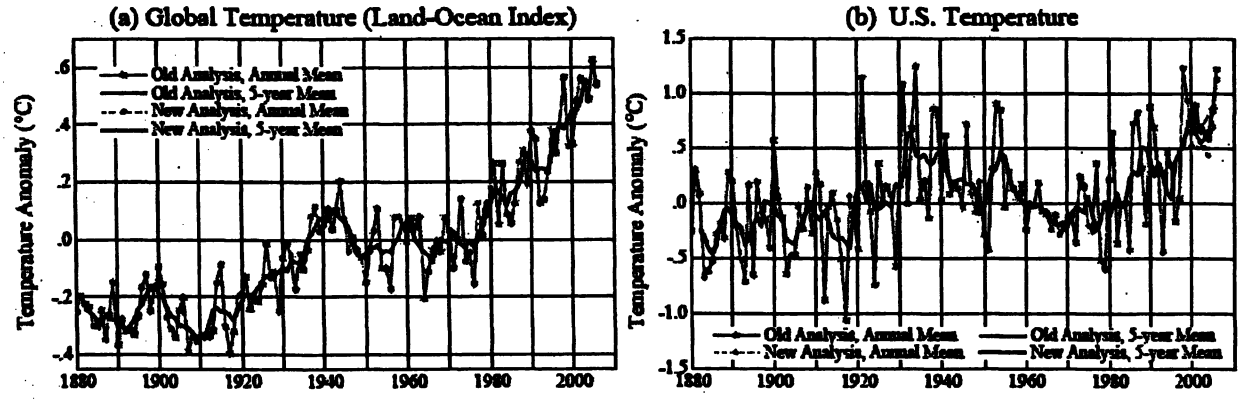

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

seek to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead discuss ranking of temperature in different years, including many false statements. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

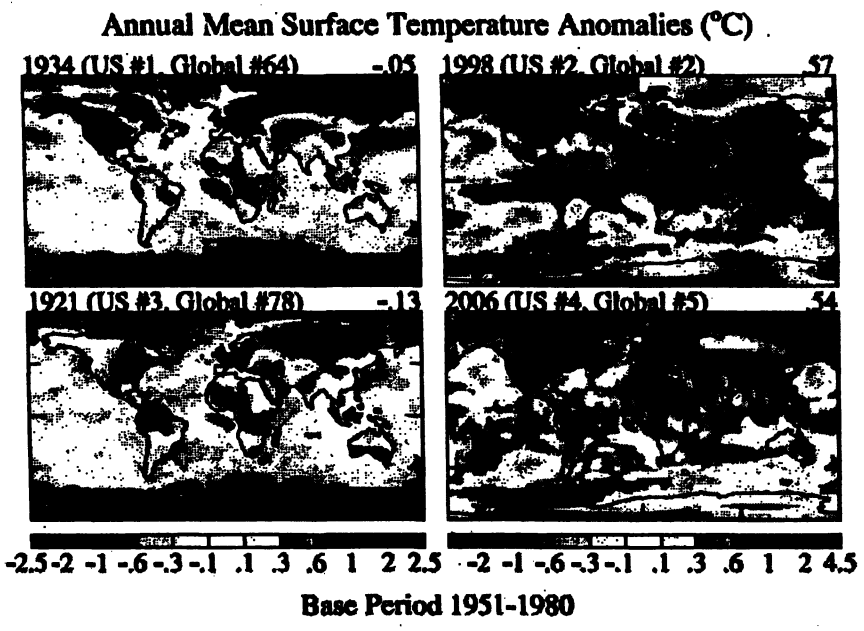

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

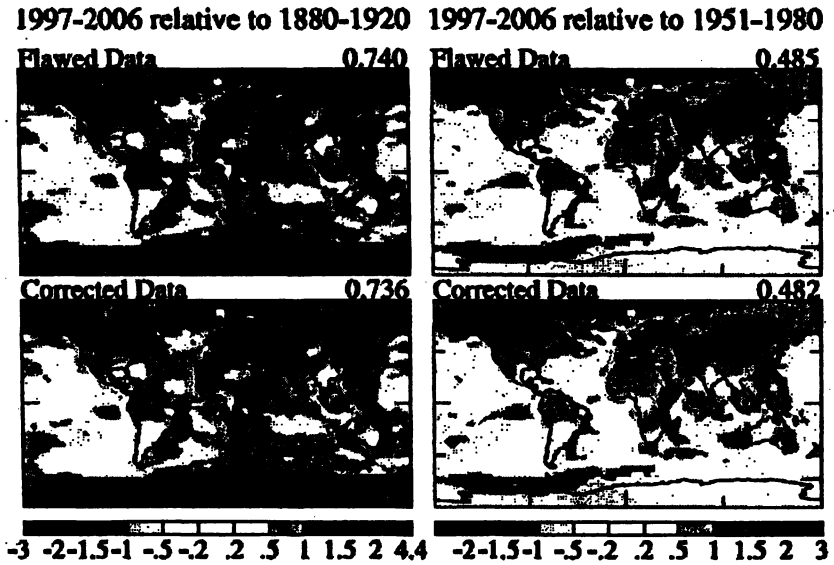

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
"Dangerous" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf
"Trace Gases" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf

Implications of this rapid and growing global climate change are discussed in "The 800 Pound Gorilla: The Threat and Taming of Global Climate Change",
"Gorilla" **Need hyperlink here**
"Gorilla" is adapted from "The Threat to the Planet" (13 July 2006 New York Rev. Books) with assistance of Walter Simpson. "Gorilla" includes sidebars on 'Likely Consequences of Global Climate Change' and 'Three Policies Needed to Defuse the Global Warming Time Bomb'.

Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the royalty controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs of EXXON/Mobil and fossil fuel leaders, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', than usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on the one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now". We can't take both positions. We need to make up our mind.

I am puzzled by views expressed by some conservatives, views usually expressed in vehement unpleasant ways in e-mails that I have been bombarded by in the past several days. It is a bit disconcerting as I come from a moderately conservative state, and I consider myself a moderate conservative in most ways. It is puzzling, because it seems to me that conservatives should be the first ones standing up for preserving Creation, and for the rights of the young and the unborn. That is the basic intergenerational issue in global warming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

Is it possible that conservatives have been too quick to support the captains of industry? If we allow industry to continue on a path of denial, to focus on their short-term profits, to deny the rights of our children, grandchildren and the unborn, if the planet passes climate tipping points, will we not share in the infamy, the infamy of the captains of industry?

It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course nature is going to, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

I am indebted to Jim Wine for schooling me in 'usufruct'.

Criticisms, as always, are welcome.

Subject: IGNORE! FORWARDING EXACT TEXT FOR: New Email
From: Darnell Cain <dcain@giss.nasa.gov>
Date: Fri, 10 Aug 2007 17:59:31 -0400
To: jhansen@giss.nasa.gov
CC: dcain@giss.nasa.gov

DKIM-Signature: a=rsa-sha1; c=relaxed/relaxed; d=gmail.com; s=beta; h=domainkey-signature:received:received:message-id:date:from:sender:to:subject:cc:in-reply-to:mime-version:content-type:references:x-google-sender-auth;
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/iw8oFRHHipUbte9ENMusaGwYjMPnMu0VrbxLJh4rghRPYnK1GR6Mwr7LQuzVgHRqxv6/nIguaxiD8vpBE19FGOwboOTc7WBw=
Date: Fri, 10 Aug 2007 16:09:05 -0500
From: "James Hansen" <jhansen@giss.nasa.gov>
Sender: jhansen.giss@gmail.com
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>
Subject: Re: New Email
Cc: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov
X-Google-Sender-Auth: 024a992bd8054d12

I made two additional changes: adding "in 2001" after jump, and moving the paragraph just before Figure 2 to just after Figure 2. Note that I removed the line
To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject
but this line should be included in the e-mail.

On 8/10/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> These changes are fine, but they need to be made to the attached version. We need to send it to the media list soon. Jim
>
> On 8/10/07, Makiko Sato <makis@giss.nasa.gov > wrote:
> Robert,
>
> At 16:43 2007/08/10, Robert B. Schmunk wrote:
>
> >Makiko,
> >
> >I generally prefer that when people link to docs on the website
> >that you use the HTML page which has the "Download PDF" link
> >rather than point directly at the PDF file itself.
>
> I don't understand this part. This is a Word file not HTML.
>
> >The word "are" all caps in the third paragraph out to be changes
> >to lower case and put in bold. Being in all caps right now and
> >close to the abberviation GHCN, it almost looks like it too is an
> >abbrevation.
>
> Jim,
>
> Please read this remark of Robert's and make the change unless you
> really want it to be ARE.
>
> >When I view the Word DOC there is no degree sign in 0.15 deg-C.
> >Is that intentional?
>
> I think SI unit doesn't have degree symbol, so just 0.15C, but I
> think it is clearer to have the usual small circle high up or write
> down deg. Jim made it 0.15C, so maybe he is using the SI unit.
>
> >The phrase "order one-thousands" should be "order one-thousandth".
>
> Yes, you are right. I will make the change
>
> >rbs
> >
> >
> >
> >
> >On Aug 10, 2007, at 16:35, Reto Ruedy wrote:
> >
> >>Makiko,
> >>
> >>In the second to thie last paragraph a "w" seems to be missing; 'global
> >>arming' is bad also, but I think it meant to be global warming.
> >>
> >>Reto
> >>

>>On Fri, 2007-08-10 at 16:26 -0400, Makiko Sato wrote:
>>>Robert,
>>>
>>>I sent this to Jim and he said he would read it once more. Do you
>>>want to change the links? If I hear from him, I will convert to a
>>>pdf and give it to you.
>>>
>>>Makiko
>>>
>>>
>>>>Date: Fri, 10 Aug 2007 16:18:16 -0400
>>>>To: "James Hansen" < jhansen@giss.nasa.gov >
>>>>From: Makiko Sato <makis@giss.nasa.gov>
>>>>Subject: Re: New Email
>>>>
>>>>Are the figures too large or too small? If I make them slightly
>>>>larger, the US one gets onto the 2nd page.
>>>>
>>>>Makiko
>>>>
>>>>
>>>>At 15:54 2007/08/10, you wrote:
>>>>> o.k., here is the draft e-mail, which needs the figures and links
>>>>>-- I am being | so it is hard to read
>>>>>right now. Jim
>>>>>Content-Type: application/msword; name="LightUpstairs. 10Aug2007.doc"
>>>>>Content-Disposition: attachment; filename="LightUpstairs. 10Aug2007.doc"
>>>>>X-Attachment-Id: f_f573l7lw
>>>--
>>Reto Ruedy < rruedy@giss.nasa.gov >
>
>--
>Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
>NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
>10025

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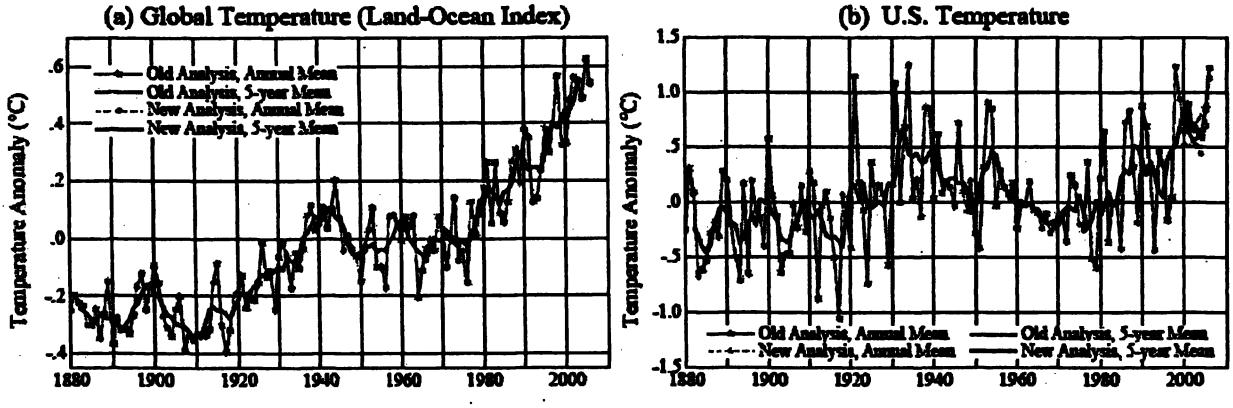

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

seek to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead discuss ranking of temperature in different years, including many false statements. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

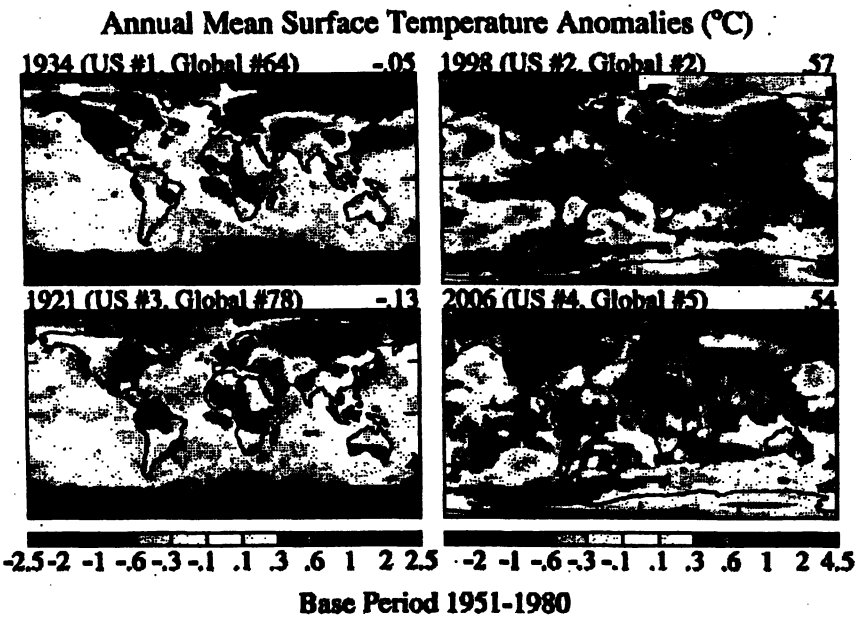

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

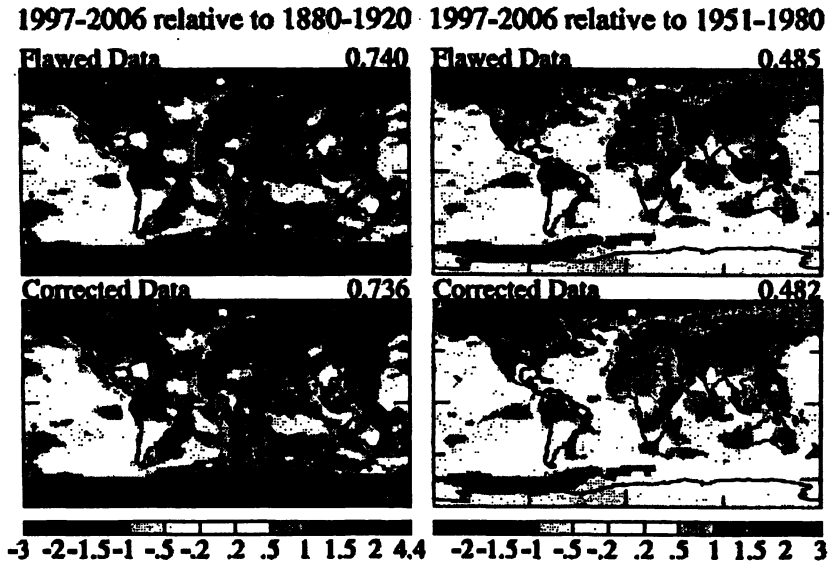

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
"Dangerous" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf
"Trace Gases" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf

Implications of this rapid and growing global climate change are discussed in "The 800 Pound Gorilla: The Threat and Taming of Global Climate Change",
"Gorilla" **Need hyperlink here**
"Gorilla" is adapted from "The Threat to the Planet" (13 July 2006 New York Rev. Books) with assistance of Walter Simpson. "Gorilla" includes sidebars on 'Likely Consequences of Global Climate Change' and 'Three Policies Needed to Defuse the Global Warming Time Bomb'.

Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the royalty controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs of EXXON/Mobil and fossil fuel leaders, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', than usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on the one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now". We can't take both positions. We need to make up our mind.

I am puzzled by views expressed by some conservatives, views usually expressed in vehement unpleasant ways in e-mails that I have been bombarded by in the past several days. It is a bit disconcerting as I come from a moderately conservative state, and I consider myself a moderate conservative in most ways. It is puzzling, because it seems to me that conservatives should be the first ones standing up for preserving Creation, and for the rights of the young and the unborn. That is the basic intergenerational issue in global warming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

Is it possible that conservatives have been too quick to support the captains of industry? If we allow industry to continue on a path of denial, to focus on their short-term profits, to deny the rights of our children, grandchildren and the unborn, if the planet passes climate tipping points, will we not share in the infamy, the infamy of the captains of industry?

It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course nature is going to, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

I am indebted to Jim Wine for schooling me in 'usufruct'.

Criticisms, as always, are welcome.

Subject: Re: Possible story about the temp record
From: Robert Cahalan <Robert.F.Cahalan@nasa.gov>
Date: Fri, 24 Aug 2007 08:45:38 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Gavin Schmidt <gschmidt@giss.nasa.gov>, Franco Einaudi <franco.einaudi@nasa.gov>, David Herring <dherring@climate.gsfc.nasa.gov>, rruedy@giss.nasa.gov, makis@giss.nasa.gov

Jim,
Please give an estimated completion date for your writeup on the temperature data adjustment, so Earth Observatory can make plans to support it.
.Bob.

On Aug 14, 2007, at 2:16 PM, James Hansen wrote:

> Thanks, Bob, I am writing something -- perhaps it can be used there, or modified to be used there.
> Jim
>
> At 01:52 PM 8/14/2007, Robert Cahalan wrote:
>> Jim,
>> Earlier I sent the following to Gavin -- and I realize that these are points you've been repeating for many years, just want to add that EarthObservatory could be helpful to get the word out:
>>
>>> Yes, I agree that this could be an educational opening for mainstream media.
>>>
>>> My feeling is we need to lead with some of the faulty claims, and then illustrate that:
>>> (1) the data is all freely available and widely used for scientific study;
>>> (2) scientists use extensive statistical testing to determine whether observed differences can be ignored as being within the observational uncertainty or natural year-to-year variations;
>>> (3) changes of a given magnitude at a station or in a limited area average like the lower 48 contiguous United States, which covers about 2% Earth's surface, are less likely to be significant than a change of similar magnitude in averages over the full surface area of the Earth, which is less affected by many local influences (mention corrections to minimize urban effects too); and
>>> (4) changes in individual years, even ones that change the ranking of years, are less likely to be associated with sustained climate change than changes averaged over several successive years. On this last point we might quote the CCSP temperature synthesis and assessment product 1.1, which emphasized this point.
>>>
>>> Of course these are all basic points that any of us climatologists know, but the public needs reminding, and this brouhaha could give

> a good opportunity to educate any "fence-sitters" who might be listening...
>
> .Bob.
>
> On Aug 14, 2007, at 12:09 PM, David Herring wrote:
>
> > Thank you for clarifying, Gavin.
> >
> > Dear Jim,
> >
> > I know you're extremely busy, but I'm writing to request a little of your time in the near future to interview you for a short feature article on NASA's Earth Observatory that we would like to do about this issue. I'd like a little help in understanding more clearly how you conduct your analyses, what the nature of the "bug" was, and the fix that you put into place.
> >
> > I have time late today (after 4 p.m.); any time after 11 a.m. tomorrow; any time before 3 p.m. on Thursday; and all day Friday. What could work for you? Also, any background reading material you care to send me / direct me to will help me to come better prepared with questions.
> >
> > Best regards,
> >
> > David Herring
> >
> > At 11:56 AM -0400 8/14/07, Gavin Schmidt wrote:
> >
> > > If you like, but you need to discuss this with Jim - This is his analysis, and he is the lead author. It actually doesn't have much to do with me at all - I'm just commenting....
> > >
> > > gavin
> > >
> > > *---------- *
> > > | Gavin Schmidt NASA/Goddard Institute for Space Studies |
> > > | 2880 Broadway |
> > > | Tel: (212) 678 5627 New York, NY 10025 |
> > > | |
> > > | |
> > > | gschmidt@giss.nasa.gov http://www.giss.nasa.gov/ ~gavin |
> > > *---------- *

On Tue, 14 Aug 2007, David Herring wrote:

> Hey Gavin,
>
> I just left you voicemail, but also wanted to write to explore your availability to speak with me about the GISS temperature record. Bob Cahalan feels, and I agree, that given the recent turn of events it might be a good idea to educate the public about how these data are gathered, and why it's actually harder to calculate average temperature for, say, the continental U.S. than it is for the whole globe.
>
> Anyway, I can see the rightwing blogosphere is revving up into high gear now and so perhaps a report on NASA's Earth Observatory and seizing this opportunity to inform the public will steal most of the hot air out of their collective balloon, eh?
>
> Please advise me on your availability to bring me up to speed. I think Bob C. would like to join us in that conversation as well.
>
> best regards,
>
> --
>
> David Herring

--

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Subject: McIntyre Interview
Date: Thu, 16 Aug 2007 11:11:31 -0400
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
Thread-Topic: McIntyre Interview
Thread-Index: AcfgFzel6LxCmFdASbCpagOv4d5vBgAAElt8AAAOQjQ=
From: "Amanda Carpenter" <amanda.carpenter@townhall.com>
To: <Leslie.M.McCarthy@nasa.gov>

Hi, Leslie.
I've attached the complete version of the interview, but this is the part I was looking for comment on. Basically, I'd just like to know if this is true and explanation of what really went on here.

Thanks!!!

Here it is:

McIntyre:I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?

Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitively downloading data. Anyway, even after I was blocked and I explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

 Steve McIntyre interview on August 15, 2007.doc

Subject: checking in
Date: Thu, 16 Aug 2007 14:32:06 -0400
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Thread-Topic: checking in
Thread-Index: AcfgM79T3GNmIzbfQhq9kRFkP8OtAg==
From: "Amanda Carpenter" <amanda.carpenter@townhall.com>
To: <Leslie.M.McCarthy@nasa.gov>

Just wanted to make sure you got my email earlier today.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com

703-247-1226 x226 desk

Steve McIntyre interview on August 15, 2007
Over the phone 4:30 pm

Q. Can you explain to me in layman's terms how you found this error?

Yeah. Quickly, a fellow in California named Anthony Watts noticed that some of the weather stations used to make historical U.S. statistics were located in places they weren't supposed to be. One of them was in a parking lot and the trend for the station in a parking lot was way up and a nearby station that was in a proper location in a rural area was relatively flat. So, this led to some controversy and he started a volunteer effort where people started surveying these weather stations and seeing what they looked like.

Now, defenders of the weather station system argued that NASA had software that could fix that data. And, so it really didn't matter if the station was in a parking lot in Tuscan or something like that. NASA software could fix it. So, that type of adjustment is a statistical issue that interests me. And, so I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?
Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitivel downloading data. Anyway, even after I was blocked and I explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Once they did that, I downloaded all 1200 stations and calculated the value of this step in the year 2000. In some cases it was a negative step and in some cases it was a positive step, but it became clear that what they had done they had, for some reason, changed the

version of data that they were using in 2000. Before 2000 they were using an adjusted version of data and after 2000 they were using an unadjusted version.
After the controversy broke out NASSA has said that the reason they did that was because the adjusted version was never available after 2000. That's actually untrue. The adjusted version is sitting in exactly the same data directory. It just seems to be an error of some kind on their part.

The amount on individual stations and this is where we started, trying to explain problems with individual stations, had jumps of up to one degree centigrade. I calculated a distribution of these jumps for all 1200 stations. Many of the jumps were negative, but the number of small jumps was itself only a fraction. Probably 75 percent of the stations had jumps of at least a quarter degree in the year 2000. But the average, because there both positive and negative ended up being somewhat over .15 degrees. That doesn't necessarily seem that much, but when the entire increase in temperature in the United States had been previously reported to be about half a degree, this .15 degree is not a small number when you are measuring half degree numbers.

So, I sent them an email notifying them of this error on Saturday August 4th and I pointed out that I thought they had changed data sources and on Tuesday August 7th they sent me a note agreeing that there was an error and they had, when I looked at their website, they had replaced the data for all1200 U.S. historical weather stations and they'd also replaced their U.S. temperature history. While they added a mention of me on their webpage describing their methodology, but didn't provide any notice to readers that they had replaced all this data. So, for example, if you had been doing a study which required that you knew what the temperature was in Reno there was no notice that the data you'd had downloaded prior to August 2007 had contained an error. And in some cases a very large error.

When I looked at what their restated U.S. temperature history was, I noticed there as a change in the leading years. So, I wrote a light-hearted post on my blog that said there's a change in the leader board at the U.S. Open and that even though people thought that the years 1934 and the years 1998 had been in the clubhouse and had a shower, in fact they were still on the course and that 1934 had a late birdie and 1998 hate a late bogie and 2006 had a late-triple bogie and when the dust settled 1934 was now the leader of the U.S. Open

Q. It seems at the heart of this was that NASA was unwilling to give you the methodology?

There are a couple of layers of issues. One issue was that they had an error. After I had identified this particular error to them and asked them for their source code so I could see how the rest of their adjustments actually worked, and this was really kind of an incidental point in checking their adjustment process. One of the things I started from was trying to evaluate whether their adjustment process was equal in adjusting bad data. One of the things I think you can conclude from this exercise is that there adjustment software was obviously incapable of picking up fictionist jumps even as big as one

degree centigrade in the year 2000 and the proof was in the pudding because they hadn't picked it up. In fact, they hadn't only failed to fix it, they created it. So, the claim that they're adjustment methodology was capable of fixing bad data, I mean, that's the point I want people to take home from this. What they've done now is inserted a patch into an error that I identified for them but they haven't established that the rest of their adjustment methodology is any good. The adjustments are not small. The adjustments that they make are fully equal to the total amount of warming in the United States the past century. So, you're dealing with adjustments that are the same size as the effect that you are trying to measure. So, it's worth spending a minute or two trying to understand exactly what they did. Now, my interest in these things is understanding exactly what they did. Now, they're point of view is well, Gavin Scmidt of NASA says well "I don't get this audit mean." What he calls the audit mean. Well you know, everyone in the world, if you aren't an academic and you're doing business offerings or you work in a company, you get audited. And you can't say to an auditor, here are the invoices, you do your own financial statements if you don't like ours. Then, the auditor says my only interest how you did yours. So, when Gavid Schmidt says well you don't think we've done an adjustment methodology, why don't you do your own calculation and you can publish it, try to publish it in peer-reviewed literature and we can start from there. My take is well, I've had other experiences with folks like that before and then they think if you mis-implemented their methodology they scream to high heaven. So, I said "No" and they said "You are asking to be spoon-fed" and I said "No, I'm not asking to be spoon-fed." I'll deal with raw code, it's just that the verbal descriptions in academic articles to not meet the kind of engineering, quality level that I expect from things or that I am looking for and that represents one point of dispute between me and them. They don't seem to accept the idea. This is an important issue and therefore academics have to stop being precious and arguing that these codes are their private property.

Q. If NASA were to handle this all better, or to your liking, what are some recommendations you'd give them?

One of the main recommendations I've consistently made both to NASA and to journals is that when people publish articles they should have to archive the data as they used it. The exact providence of their data if they downloaded it from an internet archive they should have to post the URL of the place where they got the data and the date they downloaded it so you can know the exact version they got in case the versions change. And, they should archive the code in which they obtained the calculations. This is not by any means an impossible or far-fetched set of protocols. In econometrics right now, if you want to get an article published in the American Economic Review, a leading journal, that's exactly what you have to do. That policy was instituted by the then-editor who is now chairman of the federal reserve system. It's a policy that is easy to implement and there is a lot more riding right now on climate policy than there is on labor market studies or studies of inflation. So, I think there's every reason to require NASA and other contributors to climate science to improve their game in terms of how they provide disclosure to other readers and other researchers of their methodology and data.

In some cases there are some real problems. You know Lonnie Thompson the ice guy has published sort of summaries of his data which are mutually inconsistent and I've tried to get original sample data to try and reconcile these and he's refused and he's published articles in journals and the journals have refused to require him to do it and the National Science Foundation which has funded it has refused to require it so it's not just NASA it's a very widespread problem in climate science right now.

Subject: Question on GISS temperature data changing warmest year
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 11:00:44 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

Hi Jim:

Just left you a voice mail....you should have received an email inquiry from Charlie Lewis of the National Post newspaper in Canada asking for your comment and answer to some questions about new claims by Steve McIntyre that the GISS temperature data wrongly orders the warmest year on record...

Here's a story on the accusations:

http://newsbusters.org/blogs/noel-sheppard/2007/08/09/did-media-or-nasa-withhold-climate-history-data-changes-public

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Unfortunately, McIntrye's site, www.climateaudit.org , does not appear to be operational.

How do you wish to address this inquiry and any others that may come in??

Thanks.

Leslie

Original Message:

From: Lewis, Charles (National Post) clewis@nationalpost.com
Date: Fri, 10 Aug 2007 10:16:09 -0400
To: lnolan@giss.nasa.gov
Subject: Request

I have a media request. I was told you were the best person to get in touch with and it was best to reach you by email. The National Post is a national Canadian newspaper. My number is 416-383-2472. Hope to hear from you soon.

Charles Lewis
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1450 Don Mills Road
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visit us at http://www.nationalpost.com
The News. When You Want It. Where You Want It.

degree centigrade in the year 2000 and the proof was in the pudding because they hadn't picked it up. In fact, they hadn't only failed to fix it, they created it. So, the claim that they're adjustment methodology was capable of fixing bad data, I mean, that's the point I want people to take home from this. What they've done now is inserted a patch into an error that I identified for them but they haven't established that the rest of their adjustment methodology is any good. The adjustments are not small. The adjustments that they make are fully equal to the total amount of warming in the United States the past century. So, you're dealing with adjustments that are the same size as the effect that you are trying to measure. So, it's worth spending a minute or two trying to understand exactly what they did. Now, my interest in these things is understanding exactly what they did. Now, they're point of view is well, Gavin Scmidt of NASA says well "I don't get this audit mean." What he calls the audit mean. Well you know, everyone in the world, if you aren't an academic and you're doing business offerings or you work in a company, you get audited. And you can't say to an auditor, here are the invoices, you do your own financial statements if you don't like ours. Then, the auditor says my only interest how you did yours. So, when Gavid Schmidt says well you don't think we've done an adjustment methodology, why don't you do your own calculation and you can publish it, try to publish it in peer-reviewed literature and we can start from there. My take is well, I've had other experiences with folks like that before and then they think if you mis-implemented their methodology they scream to high heaven. So, I said "No" and they said "You are asking to be spoon-fed" and I said "No, I'm not asking to be spoon-fed." I'll deal with raw code, it's just that the verbal descriptions in academic articles to not meet the kind of engineering, quality level that I expect from things or that I am looking for and that represents one point of dispute between me and them. They don't seem to accept the idea. This is an important issue and therefore academics have to stop being precious and arguing that these codes are their private property.

Q. If NASA were to handle this all better, or to your liking, what are some recommendations you'd give them?

One of the main recommendations I've consistently made both to NASA and to journals is that when people publish articles they should have to archive the data as they used it. The exact providence of their data if they downloaded it from an internet archive they should have to post the URL of the place where they got the data and the date they downloaded it so you can know the exact version they got in case the versions change. And, they should archive the code in which they obtained the calculations. This is not by any means an impossible or far-fetched set of protocols. In econometrics right now, if you want to get an article published in the American Economic Review, a leading journal, that's exactly what you have to do. That policy was instituted by the then-editor who is now chairman of the federal reserve system. It's a policy that is easy to implement and there is a lot more riding right now on climate policy than there is on labor market studies or studies of inflation. So, I think there's every reason to require NASA and other contributors to climate science to improve their game in terms of how they provide disclosure to other readers and other researchers of their methodology and data.

In some cases there are some real problems. You know Lonnie Thompson the ice guy has published sort of summaries of his data which are mutually inconsistent and I've tried to get original sample data to try and reconcile these and he's refused and he's published articles in journals and the journals have refused to require him to do it and the National Science Foundation which has funded it has refused to require it so it's not just NASA it's a very widespread problem in climate science right now.

Subject: Question on GISS temperature data changing warmest year
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 11:00:44 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

Hi Jim:

Just left you a voice mail....you should have received an email inquiry from Charlie Lewis of the National Post newspaper in Canada asking for your comment and answer to some questions about new claims by Steve McIntyre that the GISS temperature data wrongly orders the warmest year on record...

Here's a story on the accusations:

http://newsbusters.org/blogs/noel-sheppard/2007/08/09/did-media-or-nasa-withhold-climate-history-data-changes-public

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Unfortunately, McIntrye's site, www.climateaudit.org , does not appear to be operational.

How do you wish to address this inquiry and any others that may come in??

Thanks.

Leslie

Original Message:

From: Lewis, Charles (National Post) clewis@nationalpost.com
Date: Fri, 10 Aug 2007 10:16:09 -0400
To: lnolan@giss.nasa.gov
Subject: Request

I have a media request. I was told you were the best person to get in touch with and it was best to reach you by email. The National Post is a national Canadian newspaper. My number is 416-383-2472. Hope to hear from you soon.

Charles Lewis
National Post
1450 Don Mills Road
Toronto, Ontario M3B 2X7
Tel (416) 383-2472 Fax (416) 510-6830
e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com
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Subject: more on McIntrye allegations
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 11:07:53 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

Jim and Reto:

More...scroll down...on the accuations McIntyre is making about the GISS temperature data..

Leslie

Original Message:

From: Lewis, Charles (National Post) clewis@nationalpost.com
Date: Fri, 10 Aug 2007 10:53:17 -0400
To: lnolan@giss.nasa.gov
Subject: FW: Fyi

Charles Lewis
National Post
1450 Don Mills Road
Toronto, Ontario M3B 2X7
Tel (416) 383-2472 Fax (416) 510-6830
e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com
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------ Forwarded Message
From: "Lewis, Charles (National Post)" <clewis@nationalpost.com>
Date: Fri, 10 Aug 2007 09:18:08 -0400
To: National Post <clewis@nationalpost.com>
Conversation: Fyi
Subject: Fyi

Steve McIntyre, of Toronto operates www.climateaudit.org and began to investigate the data and the methods used to arrive at the results that were graphed by NASA¹s Goddard Institute for Space Studies (GISS).

What he discovered was truly amazing. Since NASA does not fully publish the computer source code and formulae used to calculate the trends in the graph, nor the correction used to arrive at the ³corrected² data. He had to reverse engineer the process by comparing the raw data and the processed data..

Here is one of his first posts where he begins to understand what is happening. ³This imparts an upward discontinuity of a deg C in wintertime and 0.8 deg C annually. I checked the monthly data and determined that the discontinuity occurred on January 2000 - and, to that extent, appears to be a Y2K problem. I presume that this is a programming error.²

He further refines his argument showing the distribution of the error, and the problems with the USHCN temperature data. He also sends an email to NASA GISS advising of the problem.

He finally publishes it here, stating that NASA made a correction not only on their own web page, attributing the discovery to McIntyre, but NASA also issued a corrected set of temperature anomaly data which you can see here:

http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

Steve McIntyre posted this data from NASA's newly published data set from Goddard Institute of Space Studies (GISS) These numbers represent deviation from the mean temperature calculated from temperature measurement stations throughout the USA.

According to the new data published by NASA, 1998 is no longer the hottest year ever. 1934 is.

Four of the top 10 years of US CONUS high temperature deviations are now from the 1930s: 1934, 1931, 1938 and 1939, while only 3 of the top 10 are from the last 10 years (1998, 2006, 1999). Several years (2000, 2002, 2003, 2004) fell well down the leaderboard, behind even 1900. (World rankings of temperature are calculated separately.)

Top 10 GISS U.S. Temperature deviation (deg C) in New Order 8/7/2007

Year	Old	New
1934	1.23	1.25
1998	1.24	1.23
1921	1.12	1.15
2006	1.23	1.13
1931	1.08	1.08
1999	0.94	0.93
1953	0.91	0.90
1990	0.88	0.87
1938	0.85	0.86
1939	0.84	0.85

Here's the old order of top 10 yearly temperatures.

Year	Old	New
1998	1.24	1.23
1934	1.23	1.25
2006	1.23	1.13
1921	1.12	1.15
1931	1.08	1.08
1999	0.94	0.93
1953	0.91	0.90
2001	0.90	0.76
1990	0.88	0.87
1938	0.85	0.86

I salute the work of Steven McIntyre, he has now made two major contributions to climate science.
1) Proving how the Mann 'hockey stick' used in all Gore's movie, An Inconvenient Truth, was based on unsupportable data and methods.
2) Proving how yearly temperature anomalies for the USA are based on data that had been processed incorrectly.

Dr. Roger Pielke of the University of Colorado also deserves credit becuase he was the one who encouraged me to pursue the www.surfacestations.org project due to his broad work on land use change and it's affect on regional and local climate.

Posted by Anthony Watts at 04:08 PM | Permalink |

Charles Lewis
National Post
1450 Don Mills Road
Toronto, Ontario M3B 2X7
Tel (416) 383-2472 Fax (416) 510-6830
e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com
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------ End of Forwarded Message

Subject: FW: top ten hottest years on record
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 11:08:57 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

Jim and Reto:

How do you want to reply to this?

Thanks.

Leslie

Original Message:

From: @stlcc.edu
Date: Thu, 09 Aug 2007 18:45:48 -0500
To: Leslie.M.McCarthy@nasa.gov
Subject: top ten hottest years on record

Mr. McCarthy,

I read today that previous reports of the hottest years on record were not accurately reported and that

four of the top ten hottest years on record are from the 30s with 1934 as the hottest. Is this correct information and if so why isn't that noted on the web site?

Thanks for your help.

Email: @stlcc.edu <mailto: @stlcc.edu>
Phone: * Fax

Subject: RE: [Fwd: Re: revisions to annual temps]
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 12:21:16 -0400
To: rruedy@giss.nasa.gov
CC: jhansen@giss.nasa.gov

Thanks, Reto...I'll leave it to Jim to reply to these inquiries...do you know if he's around today? I left him a voice mail earlier on his cellphone...thanks!

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Fri, 10 Aug 2007 11:49:35 -0400
To: lesgiss@verizon.net, jhansen@giss.nasa.gov
Subject: [Fwd: Re: revisions to annual temps]

Hi Leslie,

Andy Revkin asked the same question and Jim's answer below says it all in the clearest and most beautiful way.

The blog you attached is a prime example of what gives bloggers a really bad name; somebody with no idea what he is talking about is spouting absolute nonsense, making no distinctions between what is essential (the facts he conveniently omits) and what is pure noise (which he is concentrating on exclusively).

He omits that the global mean time series (which is generally considered the standard measure for global warming) is unaffected

He concentrates on US time series which (US covering less than 2% of the world) is so noisy and has such a large margin of error that no conclusions can be drawn from it at this point; showing the plot of annual means before and after the correction would have made the whole article a joke since the differences are barely visible.

He had to use the device of ranking the years rather than showing the plots to make any point at all. The problem with rankings is that there are large clumps of years which are equal within the margin of error and rankings within these clumps are purely accidental.

He finds it astounding that years 1934 and 1998 reversed ranks, not remembering that the corrections only affected years 2000-2006, hence that there is no possible connection there.

By speaking of warmest year (rather than warmest year in the US time record) he successfully deceived people like Mark Taylor.

Reto

-------- Forwarded Message --------
From: James Hansen <jhansen@giss.nasa.gov>
To: Andrew Revkin <anrevk@nytimes.com>
Cc: gschmidt@giss.nasa.gov, Reto Ruedy <cdrar@giss.nasa.gov>
Subject: Re: revisions to annual temps

Date: Thu, 9 Aug 2007 22:34:43 -0500

Hi Andy,

This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.

The net effect averaged over the U.S. was an error of about 0.15C or less in the post-2000 years, well within the uncertainty bar that we give. The effect on the global mean was of the order of a thousands of a degree, i.e., entirely negligible.

It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!

Jim
(Reto, please correct if there is anything in the above that is not right.)

On 8/9/07, Andrew Revkin <anrevk@nytimes.com> wrote:

> hi,
>
> you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.
>
> were the revisions published yet, or are they updated in databases alone?
>
> also, are you doing same for global mean temp or is this specific issue related to US?
>
> ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: The North Pole Was Here
> Amazon book: The Burning Season
> Acoustic-roots band Uncle Wade

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: FW: GISS - Truth driven vs agenda driven
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 10 Aug 2007 12:44:19 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov

Original Message:

From: @shaw.ca
Date: Fri, 10 Aug 2007 09:34:53 -0700
To: Leslie.M.McCarthy@nasa.gov
Subject: GISS - Truth driven vs agenda driven

Dear Leslie,

My fellow Canadians have unveiled another Global warming scam - yours!

Now that we know Mr. Hansen used incorrect data or procedures in determining the "hottest years", concluding that the top 5 warmest yeats since the 1890s are : 2005, 1998, 2002, 2003, 2006.

Yet, there on your website (http://www.giss.nasa.gov/research/news/20070208/) is the information still making what is now known to be a bogus claim.

Yes we are at a tipping point all right. And the truth is spilling all over your pro-AGW agenda.

Just like Mr. Manns infamous Hockey Stick graph, which was proven fraudulent by the same people who found your glaring errors, another lie bites the dust. Funny thing is, when they determined Mr. Mann was fudging things, they found that Mr. Mann's "peer reviewed" work was reviewed but not put through a rigourous, truth seeking, audit. That led to them forming climateaudit.org, to apply the audits that are so obviously missing from the process. And BINGO - Mr. Hansen is unmasked as a zealot.

Now, are you honestly a scientific driven institution, or will you admit to being an agenda driven one? I await the press conference to announce that you have had to revise the hottest years list. I await the update to your website to reflect the new, peer-audited, results. I await the confession that you made a huge mistake. I await the firing of those who created and flogged this lie.

Will you do the right thing?

Sincerely

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, @giss.nasa.gov
Cc: dcain@giss.nasa.gov, robert.j.gutro@nasa.gov, scole@pop600.gsfc.nasa.gov
Date: Mon, 13 Aug 2007 10:58:23 -0400
Subject: another GISSTEMP inquiry
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7DF1YF639425960

Hi Jim:

Two more calls of inquiry this morning on the GISSTEMP questions/changes:

1) Rob Gutro received a call from Daniel Dale of the Toronto Star (416-997-1169)

2) Steve Cole received a call from Richard Lofkin (he's not sure of the last name) of the Scotsman newspaper...working in Florida...his deadline is noon today...(954-755-5116)

Are you planning to issue any type of statement for the Friday inquiries or these??

Thanks.

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, [redacted]@gmail.com, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov
Cc: dcain@giss.nasa.gov, ltravis@giss.nasa.gov
Date: Mon, 13 Aug 2007 11:12:04 -0400
Subject: more on GISTEMP story
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7DFIeEs39740845

Thought you might be interested in this....

http://newsbusters.org/blogs/noel-sheppard/2007/08/13/how-important-nasa-s-change-historical-climate-data-last-week

Leslie

Subject: FW: Washington Times--from HQ PAO
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Mon, 13 Aug 2007 15:42:07 -0400
To: jhansen@giss.nasa.gov, @gmail.com, ltravis@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov

Hi Jim, Reto and Gavin:

Tabatha Thompson is an SMD PAO at HQ and is inquiring about the GISTEMP changes....do you want to respond to her directly?? Reto did send me Jim's response to Andy Revkin, as well as a bit more clarification, but I don't know if you want that sent, so I'll wait until instructed.

Please let me know ASAP.

Thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Mon, 13 Aug 2007 13:28:05 -0400
To: leslie.m.mccarthy@nasa.gov, lesgiss@verizon.net, scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov, edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
Subject: Washington Times

All --
Can any of you help me find the place on the NASA site to which he's referring? I need to get back to a reporter, so I'd love any help I can get. Our HQ scientists aren't familiar with any change. Thanks!
Tabatha

From: Dunbar, Brian (HQ-NB050)
Sent: Monday, August 13, 2007 10:43 AM
To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
Subject:

http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1012/commentary

Not sure what web site he's referring to.

bd

Subject: Light Upstairs to HQ PAO?
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Mon, 13 Aug 2007 15:49:00 -0400
To: jhansen@giss.nasa.gov, @gmail.com
CC: gschmidt@giss.nasa.gov, ltravis@giss.nasa.gov, rruedy@giss.nasa.gov, dcain@giss.nasa.gov

Hi...

Can I send the Light Upstairs email to Tabatha Thompson in response to her inquiry? Do you want the last paragraph or two to remain or cut out??

Thanks.

Leslie

On Fri, 10 Aug 2007, Reto Ruedy wrote:

> Hi Keith,
>
> We compute these means every month, but since these are annual means,
> they are copied to the web site only once a year (on February).
>
> So the change that caused all the havoc must have happened after one of
> the previous routine updates.
>
> Thanks for noticing that,
>
> Reto
>
> On Fri, 2007-08-10 at 17:52 -0400, Keith Winstein wrote:
>> Thanks, this is very interesting -- even playing this "which is
>> numerically higher" game (if you will indulge that for a bit more), the
>> correction did not affect the relative ordering of the years. 1934 was at
>> 1.25 before and after the correction, and 1998 was at 1.23 before and
>> after the correction.
>>
>> Do you have any idea why the "before_correction" data doesn't match the
>> version that Google downloaded on July 23, 2007 from
>> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt ?
>>
>>
http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp
>>
/graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&c
>> t=clnk&cd=1&gl=us&client=firefox-a
>>
>> In _that_ version, 1934 was at 1.23 and 1998 was at 1.24.
>>
>> Perhaps the July 23 2007 version had not yet incorporated the June 2007
>> data? Any insights would be much appreciated.
>>
>> Thanks, and best regards,
>> Keith Winstein
>> 617-654-6864
>> The Wall Street Journal
>>
>> On Fri, 10 Aug 2007, Reto Ruedy wrote:
>>
>>> Hi Keith,
>>>
>>> Hope you got my data; by the way, the standard deviation of the US
>>> series is about .47 C . So the .5C is about 1 standard deviation.
>>>
>>> We got part of our estimate based on comparing means of model data with
>>> applying our method to the same data after removing some of these data

>>> similar to what we had available in observations.
>>>
>>> Reto
>>>
> –
> Reto Ruedy <rruedy@giss.nasa.gov>
>
–
Reto Ruedy <rruedy@giss.nasa.gov>

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Date: Mon, 13 Aug 2007 15:50:58 -0400
Subject: for weekly report (late entry)
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7DJs8Eu40027632

Rob:

Late Friday evening media contact by Dr. Reto Ruedy with the Wall Street Journal on the GISTEMP questions...

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Fri, 10 Aug 2007 19:02:21 -0400
To: lnolan@giss.nasa.gov
Subject: [Fwd: Re: yr 2000 corr.]

Hi Leslie,

I talked to this person on the phone - he said he writes for the Wall Street Journal.

Reto

------ Forwarded Message ------\

From: Keith Winstein @MIT.EDU>
To: Reto Ruedy <rruedy@giss.nasa.gov>
Cc: Keith Winstein @MIT.EDU>
Subject: Re: yr 2000 corr.
Date: Fri, 10 Aug 2007 18:24:07 -0400 (EDT)

Yes, if that's the case, it does seem like this kerfluffle is totally unrelated to the year-2000 correction. (Or at least, even if you had never fixed the bug, the new files posted in February 2008 would have caused a kerfluffle.)

Thank you so much for all your time.

Regards,
Keith

Subject: FW: Wall Street Journal Inquiry
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Mon, 13 Aug 2007 16:37:06 -0400
To: rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov, jhansen@giss.nasa.gov, [redacted]@gmail.com
CC: dcain@giss.nasa.gov

hi all:

Tabatha from HQ PAO forwarded this one to me....it is from a DIFFERENT reporter than the one Reto exchanged emails with on Friday evening...she is going to tell this reporter to talk to the one that Reto gave answers to....

Thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Mon, 13 Aug 2007 15:46:21 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: Wall Street Journal Inquiry

Leslie,
I had a Wall Street Journal inquiry regarding this blog and the data referenced. Have you worked on any talking points? Can I refer him to you?

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Tabatha Thompson
Public Affairs Officer
NASA Headquarters
Washington, DC 20546
direct 202.358.3895

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: tabatha.thompson-1@nasa.gov, scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov, edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
Cc: robert.j.gutro@nasa.gov, lynn.chandler-1@nasa.gov
Date: Tue, 14 Aug 2007 11:35:31 -0400
Subject: RE: Washington Times
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EFdsEr39918130

Hi to all:

Here's an email Jim Hansen sent which explains the changes. This email is shared with his permission. He also responded yesterday to an inquiry from Don Anderson and Jack Kaye.

http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf

If you have any additional questions, please let me know.

Thanks.

Leslie McCarthy

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Mon, 13 Aug 2007 13:28:05 -0400
To: leslie.m.mccarthy@nasa.gov, lesgiss@verizon.net, scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov, edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
Subject: Washington Times

All --
Can any of you help me find the place on the NASA site to which he's referring? I need to get back to a reporter, so I'd love any help I can get. Our HQ scientists aren't familiar with any change. Thanks!
Tabatha

From: Dunbar, Brian (HQ-NB050)
Sent: Monday, August 13, 2007 10:43 AM
To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
Subject:

http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1012/commentary

Not sure what web site he's referring to.

bd

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: dshapley@hearst.com
Date: Tue, 14 Aug 2007 11:38:00 -0400
Subject: RE: Revision to temp records?
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EFg8Er40162184

Good morning. Here is some additional information on the subject, written by Dr. James Hansen, Director of the NASA Goddard Institute for Space Studies (GISS). If you have any additional questions, you can send them to me, or to him directly (please cc me) at jhansen@giss.nasa.gov

http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf

Thank you.

Leslie McCarthy
NASA GISS
2880 Broadway
New York, NY 10025
www.giss.nasa.gov
leslie.m.mccarthy@nasa.gov AND lesgiss@verizon.net
212-678-5507

Original Message:

From: Dan J Shapley dshapley@hearst.com
Date: Tue, 14 Aug 2007 09:01:21 -0400
To: Leslie.M.McCarthy@nasa.gov
Subject: Revision to temp records?

Hi Leslie,

I saw this story in the Toronto Star today (http://www6.lexisnexis.com/publisher/EndUser?Action=UserDisplayFullDocument&orgId=101937&topicId=106030004&docId=l:655133574) and wanted to check its veracity.

I hadn't heard about a revision to NASA's temp readings that would make 1934 the hottest on record (rather than 1998). If there has been a revision, please point me in the right direction, so I can understand the new results and what changed.

Thanks,
Dan

Dan Shapley
News Editor
TheDailyGreen.Com
212-649-4375

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Date: Tue, 14 Aug 2007 11:43:51 -0400
Subject: one more for weekly
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EFIQF140187697

Good morning..

Sent Jim's piece, with his permission, to Dan Shapley, News Editor for TheDailyGreen.com, who made inquiry via email this morning about the GISTEMP story...

Thanks.

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, [redacted]@gmail.com
Cc: robert.j.gutro@nasa.gov
Date: Tue, 14 Aug 2007 15:09:04 -0400
Subject: FW: Do we need an editor's note on GISS data web page?
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EJDqEx40069220

Hi Jim:

See the question below about whether we need to put an editor's note on the data changes? Tabatha Thompson is an SMD PAO at HQ, Jason Townsend is the Acting GSFC webmaster while Lynn Jenner, the webmaster,
Rob Gutro is Acting News Chief this week while Ed Campion is in Houston supporting the shuttle mission.

Please let me know.

Thanks.

Leslie

Original Message:

From: rgutro@pop900.gsfc.nasa.gov
Date: Tue, 14 Aug 2007 19:03:00 +0000
To: Jason.C.Townsend@nasa.gov, Edward.S.Campion@nasa.gov, mark.s.hess@nasa.gov, lesgiss@verizon.net, Tabatha.Thompson-1@nasa.gov, stephen.e.cole@nasa.gov
Subject: Do we need an editor's note on GISS data web page?

Jason - This is a question for Tabatha at HQ - who would have to work with Leslie McCarthy at NASA GISS, so I'm forwarding this question to them.
Tabatha, Leslie- Do we need an editors Note (Using some of Jim's response) on
the webpage where the GISS data story appears?
Rob

Quoting Jason Townsend <Jason.C.Townsend@nasa.gov>:

> How best do you want me to handle this? And what wording should we
> use? Do you know of pages off the top of your head that are due for
> this 'editors note'??
>

> Thanks,
>
> -jason
>

> >Subject: FW: Washington Times
> >Date: Tue, 14 Aug 2007 14:36:07 -0400
> >Thread-Topic: Washington Times
> >Thread-Index: AcfeiPUy0imqSRGgSI+bEMkQOPO3LAAA1qlwAAU2l90AACBiEAAAEOmA
> >From: "Wilson, Jim (HQ-NB050)" <jim.wilson@nasa.gov>
> >To: "Townsend, Jason C. \(GSFC-130.0\)" <jason.c.townsend@nasa.gov>
> >
> >Jason – FYI – I know Lynn is out.
> >
> >----Original Message----
> >From: Wilson, Jim (HQ-NB050)
> >Sent: Tuesday, August 14, 2007 2:35 PM
> >To: Jenner, Lynn A. (GSFC-130.0)
> >Subject: FW: Washington Times
> >
> >I don't know if you've been following all of this, but you might just
> >want to check and see if there are any portal pages we need to update. I
> >don't think we're required to re-write history, but we could put an
> >editor's note on something if needed.
> >
> >----Original Message----
> >From: Thompson, Tabatha (HQ-NB000)
> >Sent: Tuesday, August 14, 2007 2:30 PM
> >To: Wilson, Jim (HQ-NB050); Dunbar, Brian (HQ-NB050)
> >Subject: Fw: Washington Times
> >
> >
> >
> >---- Original Message ----
> >From: Thompson, Tabatha (HQ-NB000)
> >To: lesgiss@verizon.net <lesgiss@verizon.net>
> >Sent: Tue Aug 14 11:01:06 2007
> >Subject: RE: Washington Times
> >
> >Thanks, Leslie!
> >
> >----Original Message----
> >From: lesgiss@verizon.net [mailto:lesgiss@verizon.net]
> >Sent: Tuesday, August 14, 2007 11:36 AM
> >To: Thompson, Tabatha (HQ-NB000); scole@pop600.gsfc.nasa.gov; Herring,
> >David (GSFC Secondary); Campion, Edward S. (GSFC-130.0); Buis, Alan D.
> >(JPL-1871)[JPL]
> >Cc: Gutro, Robert J. (GSFC-130.0); Chandler, Lynn (GSFC-130.0)
> >Subject: RE: Washington Times
> >
> >Hi to all:

> >
> >Here's an email Jim Hansen sent which explains the changes. This email
> >is shared with his permission. He also responded yesterday to an
> >inquiry from Don Anderson and Jack Kaye.
> >
> >http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
> >
> >If you have any additional questions, please let me know.
> >
> >Thanks.
> >
> >Leslie McCarthy
> >
> >Original Message:
> >----------
> >From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> >Date: Mon, 13 Aug 2007 13:28:05 -0400
> >To: leslie.m.mccarthy@nasa.gov, lesgiss@verizon.net,
> >scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov,
> >edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
> >Subject: Washington Times
> >
> >
> >All --
> >Can any of you help me find the place on the NASA site to which he's
> >referring? I need to get back to a reporter, so I'd love any help I can
> >get. Our HQ scientists aren't familiar with any change. Thanks!
> >Tabatha
> >
> >_____
> >
> >From: Dunbar, Brian (HQ-NB050)
> >Sent: Monday, August 13, 2007 10:43 AM
> >To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
> >Subject:
> >
> >http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1
> >012/commentary
> >
> >Not sure what web site he's referring to.
> >
> >bd
> >
> >
> >----------
> >mail2web LIVE - Free email based on Microsoft(r) Exchange technology -
> >http://link.mail2web.com/LIVE
>
>
> --
> Jason C. Townsend

> NASA Goddard Space Flight Center
> Office of Public Affairs - Code 130
> 8800 Greenbelt Road
> Greenbelt, Maryland 20771
> jason.c.townsend@nasa.gov
> http://www.nasa.gov/goddard/
> 301.286.8955 main newsroom
> 301.286.9017 desk / 301.286.1707 fax
>

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: tabatha.thompson-1@nasa.gov, rgutro@pop900.gsfc.nasa.gov, jason.c.townsend@nasa.gov, edward.s.campion@nasa.gov, mark.s.hess@nasa.gov, lesgiss@verizon.net, stephen.e.cole@nasa.gov
Date: Tue, 14 Aug 2007 15:40:53 -0400
Subject: RE: Do we need an editor's note on GISS data web page?
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EJiWEw39438439

Hi Tabatha and all:

I sent a note to Jim asking if he thinks it merits a note...will let you know his reply...thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Tue, 14 Aug 2007 15:07:20 -0400
To: rgutro@pop900.gsfc.nasa.gov, jason.c.townsend@nasa.gov, edward.s.campion@nasa.gov, mark.s.hess@nasa.gov, lesgiss@verizon.net, stephen.e.cole@nasa.gov
Subject: RE: Do we need an editor's note on GISS data web page?

Leslie,
Do you know if the data appears in multiple locations? I don't know that it warrants an editor's note. If I'm reading Dr. Hansen's note correctly, the Washington Times post has very little substance. I'd be interested in your thoughts.
Tabatha

----Original Message----
From: rgutro@pop900.gsfc.nasa.gov [mailto:rgutro@pop900.gsfc.nasa.gov]
Sent: Tuesday, August 14, 2007 3:03 PM
To: Townsend, Jason C. (GSFC-130.0)
Cc: Campion, Edward S. (GSFC-130.0); Hess, Mark S. (GSFC-130.0); lesgiss@verizon.net; Thompson, Tabatha (HQ-NB000); Cole, Stephen E. (GSFC-610.0)[RSIS]
Subject: Do we need an editor's note on GISS data web page?

Jason - This is a question for Tabatha at HQ - who would have to work with Leslie McCarthy at NASA GISS, so I'm forwarding this question to them.
Tabatha, Leslie- Do we need an editors Note (Using some of Jim's

response) on the webpage where the GISS data story appears?
Rob

Quoting Jason Townsend <Jason.C.Townsend@nasa.gov>:

> How best do you want me to handle this? And what wording should we
> use? Do you know of pages off the top of your head that are due for
> this 'editors note'??
>
> Thanks,
>
> -jason
>

> >Subject: FW: Washington Times
> >Date: Tue, 14 Aug 2007 14:36:07 -0400
> >Thread-Topic: Washington Times
> >Thread-Index:
> >AcfeiPUy0imqSRGgSI+bEMkQOPO3LAAA1qlwAAU2l90AACBiEAAAEOmA
> >From: "Wilson, Jim (HQ-NB050)" <jim.wilson@nasa.gov>
> >To: "Townsend, Jason C. \(GSFC-130.0\)" <jason.c.townsend@nasa.gov>
> >
> >Jason – FYI – I know Lynn is out.
> >
> >-----Original Message-----
> >From: Wilson, Jim (HQ-NB050)
> >Sent: Tuesday, August 14, 2007 2:35 PM
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> >
> >
> >
> >----- Original Message -----
> >From: Thompson, Tabatha (HQ-NB000)
> >To: lesgiss@verizon.net <lesgiss@verizon.net>
> >Sent: Tue Aug 14 11:01:06 2007
> >Subject: RE: Washington Times

> >
> >Thanks, Leslie!
> >
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> >From: lesgiss@verizon.net [mailto:lesgiss@verizon.net]
> >Sent: Tuesday, August 14, 2007 11:36 AM
> >To: Thompson, Tabatha (HQ-NB000); scole@pop600.gsfc.nasa.gov;
> >Herring, David (GSFC Secondary); Campion, Edward S. (GSFC-130.0);
Buis, Alan D.
> >(JPL-1871)[JPL]
> >Cc: Gutro, Robert J. (GSFC-130.0); Chandler, Lynn (GSFC-130.0)
> >Subject: RE: Washington Times
> >
> >Hi to all:
> >
> >Here's an email Jim Hansen sent which explains the changes. This
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> >
> >http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
> >
> >If you have any additional questions, please let me know.
> >
> >Thanks.
> >
> >Leslie McCarthy
> >
> >Original Message:
> >----------
> >From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> >Date: Mon, 13 Aug 2007 13:28:05 -0400
> >To: leslie.m.mccarthy@nasa.gov, lesgiss@verizon.net,
> >scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov,
> >edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
> >Subject: Washington Times
> >
> >
> >All --
> >Can any of you help me find the place on the NASA site to which he's
> >referring? I need to get back to a reporter, so I'd love any help I
> >can get. Our HQ scientists aren't familiar with any change. Thanks!
> >Tabatha
> >
> >_____
> >
> >From: Dunbar, Brian (HQ-NB050)
> >Sent: Monday, August 13, 2007 10:43 AM
> >To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
> >Subject:
> >
> >http://www.washingtontimes.com/article/20070813/COMMENTARY08/10813002

> >4/1
> >012/commentary
> >
> >Not sure what web site he's referring to.
> >
> >bd
> >
> >
> >_____
> >mail2web LIVE - Free email based on Microsoft(r) Exchange technology
> >- http://link.mail2web.com/LIVE
>
>
> --
> Jason C. Townsend
> NASA Goddard Space Flight Center
> Office of Public Affairs - Code 130
> 8800 Greenbelt Road
> Greenbelt, Maryland 20771
> jason.c.townsend@nasa.gov
> http://www.nasa.gov/goddard/
> 301.286.8955 main newsroom
> 301.286.9017 desk / 301.286.1707 fax
>

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, @gmail.com
Date: Tue, 14 Aug 2007 16:38:26 -0400
Subject: FW: Dr. Hansen available today
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EKgUEu40198257

Jim--interview request for this afternoon.....just received! I'll send her the link to the Lights piece...

Leslie

Original Message:

From: CHRISTINE BARATTA, BLOOMBERG/ NEWSROOM: cbaratta@bloomberg.net
Date: Tue, 14 Aug 2007 16:10:12 -0400
To: LNOLAN@giss.nasa.gov
Subject: Dr. Hansen available today

Hi Leslie, Just checking to see if Dr. Hansen is available to speak with Tom
Moroney from our national radio program, "Simply Put" to discuss the revised
climate data that shows 1934 as the hottest U.S. year on record, ousting 1998 as
one of the hottest years. We can do this by phone this afternoon, Please let
me know if he is available. Thank you

Christine Baratta
Executive Producer
WBBR Bloomberg Radio
cbaratta@bloomberg.net
617-210-4616 office
cell
The show is broadcast on WBBR-AM, Bloomberg's home station, reaching the entire
New York City metropolitan area and extending into Philadelphia, New Jersey,
Baltimore, New England, XM, Sirius and World Space satellite systems.

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: gschmidt@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Date: Tue, 14 Aug 2007 18:18:58 -0400
Subject: FW: Any chance I can reach Gavin Schmidt today?
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EMPTEr40286225

Hi Gavin:

I just left you a voice mail at GISS about this..don't know if you're still around or not...

Thanks.

Leslie
Original Message:

From: Maugh, Thomas Thomas.Maugh@latimes.com
Date: Tue, 14 Aug 2007 14:57:18 -0700
To: Leslie.M.McCarthy@nasa.gov
Subject: Any chance I can reach Gavin Schmidt today?

It is about the changes in the rankings of the hottest years.

Thomas H. Maugh II
Science/Medical Writer
Los Angeles Times
202 West First Street
Los Angeles, CA 90012
213 237-7953
FAX: 213 237-4712
Toll-free: 1-800-283-6397 x77953

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Date: Tue, 14 Aug 2007 18:47:28 -0400
Subject: FW: Any chance I can reach Gavin Schmidt today?
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EMrsEs39841583

Hi Rob:

For the weekly report....Gavin DID talk with him...

Leslie

Original Message:

From: lesgiss@verizon.net lesgiss@verizon.net
Date: Tue, 14 Aug 2007 18:18:58 -0400
To: gschmidt@giss.nasa.gov, jhansen@giss.nasa.gov
Subject: FW: Any chance I can reach Gavin Schmidt today?

Hi Gavin:

I just left you a voice mail at GISS about this..don't know if you're still around or not...

Thanks.

Leslie
Original Message:

From: Maugh, Thomas Thomas.Maugh@latimes.com
Date: Tue, 14 Aug 2007 14:57:18 -0700
To: Leslie.M.McCarthy@nasa.gov
Subject: Any chance I can reach Gavin Schmidt today?

It is about the changes in the rankings of the hottest years.

Thomas H. Maugh II
Science/Medical Writer
Los Angeles Times
202 West First Street
Los Angeles, CA 90012
213 237-7953
FAX: 213 237-4712
Toll-free: 1-800-283-6397 x77953

Subject: more in the news on the GISTEMP
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 08:18:17 -0400
To: jhansen@giss.nasa.gov, ltravis@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov, edward.s.campion@nasa.gov, robert.j.gutro@nasa.gov, scole@pop600.gsfc.nasa.gov, lynn.chandler-1@nasa.gov, sarah.l.dewitt@nasa.gov

Washington Post

http://www.washingtonpost.com/wp-dyn/content/article/2007/08/14/AR2007081401677.html

Washington Times editorial

http://washingtontimes.com/article/20070815/EDITORIAL/108150004/1013

Los Angeles Times

http://www.latimes.com/news/nationworld/nation/la-sci-temp15aug15,1,6588373.story?coll=la-headlines-nation

Pittsburgh Tribune-Review editorial

http://www.pittsburghlive.com/x/pittsburghtrib/opinion/archive/s_522175.html

Bloomberg

http://www.bloomberg.com/apps/news?pid=20601087&sid=aBBQO5XgLQu4&refer=home

An unrelated story in the Huffington Post on WH cuts in global climate change and other Earth monitoring satellite programs....

http://www.huffingtonpost.com/janet-ritz/nasas-climate-change-sat_b_60214.html

---

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jack.a.kaye@nasa.gov, donald.anderson-1@nasa.gov,
michael.h.freilich@nasa.gov
Cc: tabatha.thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 08:28:26 -0400
Subject: FW: more in the news on the GISTEMP
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id
I7FCWKEs39436536

Drs. Kaye, Anderson and Freilich:

Here are some stories appearing in press today on the temperature data changes...

Leslie McCarthy
NASA GISS

Original Message:

From: lesgiss@verizon.net lesgiss@verizon.net
Date: Wed, 15 Aug 2007 08:18:17 -0400
To: jhansen@giss.nasa.gov, ltravis@giss.nasa.gov, gschmidt@giss.nasa.gov,
rruedy@giss.nasa.gov, edward.s.campion@nasa.gov, robert.j.gutro@nasa.gov,
scole@pop600.gsfc.nasa.gov, lynn.chandler-1@nasa.gov,
sarah.l.dewitt@nasa.gov
Subject: more in the news on the GISTEMP

Washington Post

http://www.washingtonpost.com/wp-dyn/content/article/2007/08/14/AR2007081401
677.html

Washington Times editorial

http://washingtontimes.com/article/20070815/EDITORIAL/108150004/1013

Los Angeles Times

http://www.latimes.com/news/nationworld/nation/la-sci-temp15aug15,1,6588373.
story?coll=la-headlines-nation

Pittsburgh Tribune-Review editorial

http://www.pittsburghlive.com/x/pittsburghtrib/opinion/archive/s_522175.html

Bloomberg

http://www.bloomberg.com/apps/news?pid=20601087&sid=aBBQO5XgLQu4&refer=home

An unrelated story in the Huffington Post on WH cuts in global climate change and other Earth monitoring satellite programs....

http://www.huffingtonpost.com/janet-ritz/nasas-climate-change-sat_b_60214.html

Subject: FW: Interview request
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 09:48:21 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, @gmail.com, gschmidt@giss.nasa.gov

Hi...can you let me know which one of you talks to or emails with Mr. De Souza? Thanks.

Leslie

Original Message:

From: Mike De Souza mdesouza@canwest.com
Date: Wed, 15 Aug 2007 09:41:43 -0400
To: lnolan@giss.nasa.gov
Subject: Interview request

Hello,

I'm following up on reports that NASA has adjusted its records for annual average temperatures over the past century. Would it be possible to arrange an interview for me with an expert from the Goddard Institute who could explain what happened, and what are the implications for climate change science.

I write for the CanWest newspaper chain in Canada representing 11 major daily newspapers across the country.

Thanks very much for your time,

Mike De Souza
Reporter
CanWest News Service
office: 613-751-3303
cell:

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov; @gmail.com
Date: Wed, 15 Aug 2007 10:03:05 -0400
Subject: FW: Re: FW: Interview request
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FE7HEt40288053

Hi Jim:

See this from Gavin...please let me know.

Leslie

Original Message:

From: Gavin Schmidt gschmidt@giss.nasa.gov
Date: Wed, 15 Aug 2007 09:58:06 -0400 (EDT)
To: lesgiss@verizon.net
Subject: Re: FW: Interview request

I've never heard of him. But if Jim doesn't want to do it, he can call me

Gavin

| Gavin Schmidt NASA/Goddard Institute for Space Studies |
| 2880 Broadway |
| Tel: (212) 678 5627 New York, NY 10025 |
| |
| gschmidt@giss.nasa.gov http://www.giss.nasa.gov/~gavin |

On Wed, 15 Aug 2007, lesgiss@verizon.net wrote:

> Hi...can you let me know which one of you talks to or emails with Mr. De
> Souza? Thanks.
>
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>
> Original Message:
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> From: Mike De Souza mdesouza@canwest.com
> Date: Wed, 15 Aug 2007 09:41:43 -0400
> To: lnolan@giss.nasa.gov
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>
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> average temperatures over the past century. Would it be possible to
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> explain what happened, and what are the implications for climate change
> science.
>
> I write for the CanWest newspaper chain in Canada representing 11 major
> daily newspapers across the country.
>
> Thanks very much for your time,
>
> Mike De Souza
> Reporter
> CanWest News Service
> office: 613-751-3303
> cell:
>
>
> ---
> myhosting.com - Premium Microsoft® Windows® and Linux web and application
> hosting - http://link.myhosting.com/myhosting
>
>
>
>

---
mail2web LIVE Free email based on Microsoft® Exchange technology -
http://link.mail2web.com/LIVE

Subject: FW: Media request (Brazil)
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 10:05:59 -0400
To: jhansen@giss.nasa.gov, @gmail.com, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov

another one? any takers?

How do you want to handle these requests today/the balance of the week????

Please let me know.

HQ PAO is asking whether you will be posting a clarification on the data changes. She reports that the webmaster indicated there was a lot of "interest" in this issue. Perhaps the paragraphs that Jim is writing for Jack Kaye/Don Anderson could be used as is or adapted? Please let me know ASAP so I can advise HQ..

Thanks.

Leslie

Original Message:

From: Letícia Francisco Sorg - Redação Época - Editora Globo
lsorg@edglobo.com.br
Date: Wed, 15 Aug 2007 10:58:28 -0300
To: lnolan@giss.nasa.gov
Subject: Media request (Brazil)

Dear Leslie Nolan,

I am a journalist from ÉPOCA, a weekly magazine in Brazil, and I would like to interview one spokesperson of Nasa about the changes in the data concerning average temperatures in the United States - which have changed the warmest year from 1998 to 1934.

I would like to talk to Mr. James Hansen but I have the idea of how he is busy and how my deadline is short (today, in fact).
Then I would like to ask you for another researcher related to this issue.
I have only one main question and it would be great to have Nasa's official position towards it:
- What is the meaning of the correction for global warming theory?

I hope you can help me with this simple request.
Thank you very much,

I look forward to hearing from yoiu soon,

Best regards,

Letícia
Letícia Sorg
Assistant Editor - ÉPOCA magazine
revistaepoca.globo.com
* 55 (11) 3767-7084 (office)
.mobile)
* lsorg@edglobo.com.br

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov
Date: Wed, 15 Aug 2007 10:19:40 -0400
Subject: Re: FW: Re: FW: Interview request
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FEMvEu39898397

thanks...did you see my note that HQ PAO is asking if you will be posting a clarification on the data changes?

Once you get something written, what is your plan with it beyond answering Kaye, Anderson and Freilich, and the Congressional inquiry?

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Wed, 15 Aug 2007 10:14:48 -0400
To: lesgiss@verizon.net, @gmail.com
Subject: Re: FW: Re: FW: Interview request

That would be fine if Gavin is willing to do it. I am not taking any until I get something written, which may take most of the day. Of course, if there is a NY Times or Washington Post level, I might do that. Jim

On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> Hi Jim:
>
> See this from Gavin...please let me know.
>
> Leslie
>
> Original Message:
> ---
> From: Gavin Schmidt gschmidt@giss.nasa.gov
> Date: Wed, 15 Aug 2007 09:58:06 -0400 (EDT)
> To: lesgiss@verizon.net
> Subject: Re: FW: Interview request
>
>
>
> I've never heard of him. But if Jim doesn't want to do it, he can call me
>
>

> Gavin
>
> *----------*
> | Gavin Schmidt NASA/Goddard Institute for Space Studies |
> | 2880 Broadway |
> | Tel: (212) 678 5627 New York, NY 10025 |
> | |
> | gschmidt@giss.nasa.gov http://www.giss.nasa.gov/~gavin |
> *----------*
>
> On Wed, 15 Aug 2007, lesgiss@verizon.net wrote:
>
> > Hi...can you let me know which one of you talks to or emails with Mr. De
> > Souza? Thanks.
> >
> > Leslie
> >
> > Original Message:
> > ----------
> > From: Mike De Souza mdesouza@canwest.com
> > Date: Wed, 15 Aug 2007 09:41:43 -0400
> > To: lnolan@giss.nasa.gov
> > Subject: Interview request
> >
> >
> > Hello,
> >
> > I'm following up on reports that NASA has adjusted its records for
> annual
> > average temperatures over the past century. Would it be possible to
> arrange
> > an interview for me with an expert from the Goddard Institute who could
> > explain what happened, and what are the implications for climate change
> > science.
> >
> > I write for the CanWest newspaper chain in Canada representing 11 major
> > daily newspapers across the country.
> >
> > Thanks very much for your time,
> >
> > Mike De Souza
> > Reporter
> > CanWest News Service
> > office: 613-751-3303
> > cell:
> >
> >
> > ----------
> > myhosting.com - Premium Microsoft(r) Windows(r) and Linux web and
> application
> > hosting - http://link.myhosting.com/myhosting

> >
> >
> >
> >
>
> _____
> mail2web LIVE Free email based on Microsoft(r) Exchange technology -
> http://link.mail2web.com/LIVE
>
>
>
>

_____

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: gschmidt@giss.nasa.gov
Date: Wed, 15 Aug 2007 10:22:45 -0400
Subject: Re: FW: Interview request
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FEQNEw39258456

Gavin--Jim says thanks if you can do this. I will have De Souza call you at home. He said he is writing a response today and thinks it may take him most of the day. He said that he would prefer only to handle major requests...will you be around for any others?

Also Lynn Chandler is hosting Josh Wolfe today at GSFC. She's referring to him as working on "your" project, "Illustrated Guide to Climate Change"....is it your project??

Thanks.

Leslie

Original Message:

From: Gavin Schmidt gschmidt@giss.nasa.gov
Date: Wed, 15 Aug 2007 09:58:06 -0400 (EDT)
To: lesgiss@verizon.net
Subject: Re: FW: Interview request

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Gavin

| Gavin Schmidt NASA/Goddard Institute for Space Studies |
| 2880 Broadway |
| Tel: (212) 678 5627 New York, NY 10025 |
| |
| gschmidt@giss.nasa.gov http://www.giss.nasa.gov/~gavin |

On Wed, 15 Aug 2007, lesgiss@verizon.net wrote:

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> To: lnolan@giss.nasa.gov
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> Reporter
> CanWest News Service
> office: 613-751-3303
> cell:
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>
> ---
> myhosting.com - Premium Microsoft® Windows® and Linux web and application
> hosting - http://link.myhosting.com/myhosting
>
>
>
>

---
mail2web.com - Microsoft® Exchange solutions from a leading provider -
http://link.mail2web.com/Business/Exchange

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: mdesouza@canwest.com
Cc: gschmidt@giss.nasa.gov
Date: Wed, 15 Aug 2007 10:24:57 -0400
Subject: RE: Interview request
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FERvEx39656560

Good morning:

Dr. Gavin Schmidt is available to speak with you this morning. You can reach him at

If you require any additional assistance, please let me know.

Leslie McCarthy

Assistant Chief for Outreach
NASA Goddard Institute for Space Studies (GISS)
2880 Broadway
New York, NY 10025
(212) 678-5507
www.giss.nasa.gov
leslie.m.mccarthy@nasa.gov AND lesgiss@verizon.net

Original Message:

From: Mike De Souza mdesouza@canwest.com
Date: Wed, 15 Aug 2007 09:41:43 -0400
To: lnolan@giss.nasa.gov
Subject: Interview request

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I write for the CanWest newspaper chain in Canada representing 11 major daily newspapers across the country.

Thanks very much for your time,

Mike De Souza
Reporter

CanWest News Service
office: 613-751-3303

Subject: Re: FW: Media request (Brazil)
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 10:40:08 -0400
To: rruedy@giss.nasa.gov
CC: gschmidt@giss.nasa.gov

Thanks, Reto...I will have her call you. Gavin is doing the other one, the CanWest News Service.

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Wed, 15 Aug 2007 10:26:42 -0400
To: lesgiss@verizon.net
Subject: Re: FW: Media request (Brazil)

Leslie,

I'll talk to anybody who wants further information. This is one area I feel confident about. My phone: 212-678-5600

Reto

On Wed, 2007-08-15 at 10:05 -0400, lesgiss@verizon.net wrote:

> another one? any takers?
>
> How do you want to handle these requests today/the balance of the week????
>
> Please let me know.
>
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>
> Thanks.
>
> Leslie
>
> Original Message:
> ---
> From: LetÃcia Francisco Sorg - RedaÃ§Ã£o Ã‰poca - Editora Globo
> lsorg@edglobo.com.br
> Date: Wed, 15 Aug 2007 10:58:28 -0300
> To: lnolan@giss.nasa.gov
> Subject: Media request (Brazil)
>
> Dear Leslie Nolan,
>
> I am a journalist from Ã‰POCA, a weekly magazine in Brazil, and I would like
> to interview one spokesperson of Nasa about the changes in the data concerning average temperatures in the United States - which have changed the warmest year from 1998 to 1934.

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position towards it:
- What is the meaning of the correction for global warming theory?

I hope you can help me with this simple request.
Thank you very much,

I look forward to hearing from yoiu soon,

Best regards,

LetÃcia
LetÃcia Sorg
Assistant Editor - Ã‰POCA magazine
revistaepoca.globo.com
* 55 (11) 3767-7084 (office)
* (mobile)
* lsorg@edglobo.com.br

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: Media request (Brazil)
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 10:42:29 -0400
To: lsorg@edglobo.com.br
CC: rruedy@giss.nasa.gov

Good morning, Miss Sorg.

Dr. Reto Ruedy, a NASA Goddard Institute scientist, is available to answer your questions. You can either email him at rruedy@giss.nasa.gov or phone him here in New York at area code 212-678-5600.

Please let me know if I can be of any additional assistance.

Leslie Nolan McCarthy

Assistant Chief for Outreach
NASA Goddard Institute for Space Studies (GISS)
2880 Broadway
New York, NY 10025
(212) 678-5507
www.giss.nasa.gov
leslie.m.mccarthy@nasa.gov AND lesgiss@verizon.net
Original Message:

From: Letícia Francisco Sorg - Redação Época - Editora Globo
lsorg@edglobo.com.br
Date: Wed, 15 Aug 2007 10:58:28 -0300
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Assistant Editor - ÉPOCA magazine
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* 55 (11) 3767-7084 (office)
* (mobile)
* lsorg@edglobo.com.br

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Date: Wed, 15 Aug 2007 10:43:03 -0400
Subject: one more for weekly
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FEkREt40098459

Dr. Reto Ruedy
Leticia Sorg
EPOCA (weekly Brazilian news magazine)
changes to GISTEMP dataset

Subject: FW: RES: Media request (Brazil)
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 11:00:18 -0400
To: rruedy@giss.nasa.gov

Reto:

FYI...

Leslie

Original Message:

From: Letícia Francisco Sorg - Redação Época - Editora Globo
lsorg@edglobo.com.br
Date: Wed, 15 Aug 2007 11:50:57 -0300
To: lesgiss@verizon.net
Subject: RES: Media request (Brazil)

Dear Leslie McCarthy,

Thank you very much for your quick response. I will get in contact to Dr. Reto Ruedy via e-mail.
I think that this will be great for my article and there o need for further information so far,

Thank you,

Best regards,

Letícia

-----Mensagem original-----
De: lesgiss@verizon.net [mailto:lesgiss@verizon.net]
Enviada em: quarta-feira, 15 de agosto de 2007 11:42
Para: Letícia Francisco Sorg - Redação Época - Editora Globo
Cc: rruedy@giss.nasa.gov
Assunto: RE: Media request (Brazil)

Good morning, Miss Sorg.

Dr. Reto Ruedy, a NASA Goddard Institute scientist, is available to answer your questions. You can either email him at rruedy@giss.nasa.gov or phone him here in New York at area code 212-678-5600.

Please let me know if I can be of any additional assistance.

Leslie Nolan McCarthy

Assistant Chief for Outreach
NASA Goddard Institute for Space Studies (GISS)
2880 Broadway
New York, NY 10025
(212) 678-5507
www.giss.nasa.gov
leslie.m.mccarthy@nasa.gov AND lesgiss@verizon.net
Original Message:

From: Letícia Francisco Sorg - Redação Época - Editora Globo
lsorg@edglobo.com.br
Date: Wed, 15 Aug 2007 10:58:28 -0300
To: lnolan@giss.nasa.gov
Subject: Media request (Brazil)

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I look forward to hearing from yoiu soon,

Best regards,

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Assistant Editor - ÉPOCA magazine
revistaepoca.globo.com
* 55 (11) 3767-7084 (office)
* (mobile)
* lsorg@edglobo.com.br

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uma mensagem ao remetente, deletando-o em seguida. Quaisquer opiniões ou informações expressadas neste e-mail pertencem ao seu remetente e não necessariamente coincidem com aquelas da Editora Globo.

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: rruedy@giss.nasa.gov
Cc: scole@pop600.gsfc.nasa.gov
Date: Wed, 15 Aug 2007 14:15:16 -0400
Subject: one more inquiry
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FIJ8Eu39438359

Hi Reto:

One more inquiry, relayed by Steve Cole at GSFC.

Joe Kamalick of "Icis News" 202-776-1352...just as an fyi: appears to be a chemical industry membership website...

http://www.icis.com/Home/Default.aspx

Thanks.

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Subject: one more for weekly
Date: Wed, 15 Aug 2007 14:16:35 -0400
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FIKnF140020386

Dr. Reto Ruedy
Joe Kamalick
Icis News
GISTEMP data set changes

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, ltravis@giss.nasa.gov
Cc: robert.j.gutro@nasa.gov
Date: Wed, 15 Aug 2007 14:38:58 -0400
Subject: FW: Per our Discussion - Note for Web Site
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FIgaF839853074

Hi Jim:

This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and submitted to Jack Kaye....is this okay with you?

Thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 14:24:47 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: FW: Per our Discussion - Note for Web Site

How does this look to you?

> _____
> From: Thompson, Tabatha (HQ-NB000)
> Sent: Wednesday, August 15, 2007 11:57 AM
> To: Kaye, Jack A. (HQ-DK000)
> Subject: Per our Discussion - Note for Web Site
>
> Jack,
> Per our discussion, please review the following statement. Once I hear
> from you, I'll send it to our web people.
> ttt
> Researchers at NASA's Goddard Institute for Space Studies in New York
> recently revised information on their global temperature record based
> on corrected data. The computer modeling program that generated the
> temperature record was produced with the assumption that data from
> monitoring stations would be adjusted to account for changes such as
> the time of day at which measurements were made. However, the adjusted
> data were not always readily available and the program used data from
> monitoring stations that had not been adjusted. The result was a
> discontinuity in temperature variance in 2000. The researchers have
> corrected the computer program and posted their revised data. More

> information is available here: (LINK TO GISS SITE).
>
>

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 15:11:14 -0400
Subject: RE: FW: Per our Discussion - Note for Web Site
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7FJEwEx39980494

Hey Tabatha:

We're working on some revisions...will try to get to you today....

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 14:24:47 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: FW: Per our Discussion - Note for Web Site

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>
>

Subject: Re: FW: Per our Discussion - Note for Web Site
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 15:42:04 -0400
To: rruedy@giss.nasa.gov, jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov

Thanks, Reto.

I spoke with Tabatha again..she said Jack Kaye suggested adding the details that the changes were to US stations only, and only post-2000...

Jim--if Reto's revisions, and Jack's are okay, please let me know.

Leslie
Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Wed, 15 Aug 2007 15:24:29 -0400
To: jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov
Subject: Re: FW: Per our Discussion - Note for Web Site

Here is my suggested revision:

Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record based on corrected data. The program that replaced for some US stations the 1880-1999 record by records that were adjusted for instrumentation and procedural changes, used the original source for the later years without modifying them to fit the adjusted data. The result was a discontinuity in year 2000 for the US stations involved. Since the necessary adjustment was positive for about half the stations and negative for the other half, the effect on US means was a discontinuity of +.15C, and of .003C for the global mean series. The researchers ...

Reto

On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:

> This seems fine to me. Reto or Makiko may want to comment. Jim
>
> On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> Hi Jim:
>
> This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and
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> Leslie
>
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> ---
> From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> Date: Wed, 15 Aug 2007 14:24:47 -0400
> To: leslie.m.mccarthy@nasa.gov
> Subject: FW: Per our Discussion - Note for Web Site

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> monitoring stations that had not been adjusted. The result was a
> discontinuity in temperature variance in 2000. The researchers have
> corrected the computer program and posted their revised data. More
> information is available here: (LINK TO GISS SITE).
>
>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: NBC Nightly News tonight
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 15 Aug 2007 18:27:41 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov

Hi..just heard a promo on the Channel 4 local news for NBC Nightly News which starts at 6:30 pm...."do the naysayers on global warming have new facts on their side?"

Don't see anything yet on their website....wonder if they'll mention the GISTEMP data?

Will send you a link after it airs...

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: gschmidt@giss.nasa.gov
Date: Thu, 16 Aug 2007 10:40:31 -0400
Subject: FW: Goddard Institute
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GEedMc329792

Hi Gavin:

This is the inquiry I left you a voice mail on....will you let me know if you have time to speak with him or exchange emails?

Thanks.

Leslie

Original Message:

From: martin.delgado@mailonsunday.co.uk
Date: Thu, 16 Aug 2007 14:33:33 +0000
To: leslie.m.mccarthy@nasa.gov
Subject: Goddard Institute

Leslie,
As discussed a moment ago, here are my contact details at the Mail on Sunday.
00-44-207-938-7109 or 00-44-207-938-7400.
Cellphone
A couple of points I'd like to cover:
What is the likelihood that other countries (the UK, for example) are making similar statistical 'errors' in their temperature calculations?
Does NASA accept that the McIntyre controversy helps the cause of global warming 'sceptics'.
How can an organisation as powerful and well-resourced as NASA make such a mistake?

Thank you for your help.
Martin Delgado
Reporter, Mail on Sunday

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov, ltravis@giss.nasa.gov
Cc: dcain@giss.nasa.gov, robert.j.gutro@nasa.gov
Subject: FW: McIntyre Interview
Date: Thu, 16 Aug 2007 11:27:19 -0400

Hi to all:

Dr. McIntyre gave an interview to an organization called TownHall.com in which he alleges that NASA blocked his IP address and that because of 1.5 million hits/month on his website, NASA retreated from its position. She wants to know if this is an accurate retelling of what occurred?

The attachment is her ENTIRE 4 page interview which details in greater length the timeline and interactions with GISS....

Thanks.

Leslie

Original Message:

From: Amanda Carpenter amanda.carpenter@townhall.com
Date: Thu, 16 Aug 2007 11:11:31 -0400
To: Leslie.M.McCarthy@nasa.gov
Subject: McIntyre Interview

Hi, Leslie.
I've attached the complete version of the interview, but this is the part I was looking for comment on. Basically, I'd just like to know if this is true and explanation of what really went on here.

Thanks!!!

Here it is:

McIntyre:I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200

stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?

Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitively downloading data. Anyway, even after I was blocked and I explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

 Steve McIntyre interview on August 15, 20071.doc

Steve McIntyre interview on August 15, 2007
Over the phone 4:30 pm

Q. Can you explain to me in layman's terms how you found this error?

Yeah. Quickly, a fellow in California named Anthony Watts noticed that some of the weather stations used to make historical U.S. statistics were located in places they weren't supposed to be. One of them was in a parking lot and the trend for the station in a parking lot was way up and a nearby station that was in a proper location in a rural area was relatively flat. So, this led to some controversy and he started a volunteer effort where people started surveying these weather stations and seeing what they looked like.

Now, defenders of the weather station system argued that NASA had software that could fix that data. And, so it really didn't matter if the station was in a parking lot in Tuscan or something like that. NASA software could fix it. So, that type of adjustment is a statistical issue that interests me. And, so I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?
Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitivel downloading data. Anyway, even after I was blocked and I explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Once they did that, I downloaded all 1200 stations and calculated the value of this step in the year 2000. In some cases it was a negative step and in some cases it was a positive step, but it became clear that what they had done they had, for some reason, changed the

version of data that they were using in 2000. Before 2000 they were using an adjusted version of data and after 2000 they were using an unadjusted version.
After the controversy broke out NASSA has said that the reason they did that was because the adjusted version was never available after 2000. That's actually untrue. The adjusted version is sitting in exactly the same data directory. It just seems to be an error of some kind on their part.

The amount on individual stations and this is where we started, trying to explain problems with individual stations, had jumps of up to one degree centigrade. I calculated a distribution of these jumps for all 1200 stations. Many of the jumps were negative, but the number of small jumps was itself only a fraction. Probably 75 percent of the stations had jumps of at least a quarter degree in the year 2000. But the average, because there both positive and negative ended up being somewhat over .15 degrees. That doesn't necessarily seem that much, but when the entire increase in temperature in the United States had been previously reported to be about half a degree, this .15 degree is not a small number when you are measuring half degree numbers.

So, I sent them an email notifying them of this error on Saturday August 4th and I pointed out that I thought they had changed data sources and on Tuesday August 7th they sent me a note agreeing that there was an error and they had, when I looked at their website, they had replaced the data for all1200 U.S. historical weather stations and they'd also replaced their U.S. temperature history. While they added a mention of me on their webpage describing their methodology, but didn't provide any notice to readers that they had replaced all this data. So, for example, if you had been doing a study which required that you knew what the temperature was in Reno there was no notice that the data you'd had downloaded prior to August 2007 had contained an error. And in some cases a very large error.

When I looked at what their restated U.S. temperature history was, I noticed there as a change in the leading years. So, I wrote a light-hearted post on my blog that said there's a change in the leader board at the U.S. Open and that even though people thought that the years 1934 and the years 1998 had been in the clubhouse and had a shower, in fact they were still on the course and that 1934 had a late birdie and 1998 hate a late bogie and 2006 had a late-triple bogie and when the dust settled 1934 was now the leader of the U.S. Open

Q. It seems at the heart of this was that NASA was unwilling to give you the methodology?

There are a couple of layers of issues. One issue was that they had an error. After I had identified this particular error to them and asked them for their source code so I could see how the rest of their adjustments actually worked, and this was really kind of an incidental point in checking their adjustment process. One of the things I started from was trying to evaluate whether their adjustment process was equal in adjusting bad data. One of the things I think you can conclude from this exercise is that there adjustment software was obviously incapable of picking up fictionist jumps even as big as one

degree centigrade in the year 2000 and the proof was in the pudding because they hadn't picked it up. In fact, they hadn't only failed to fix it, they created it. So, the claim that they're adjustment methodology was capable of fixing bad data, I mean, that's the point I want people to take home from this. What they've done now is inserted a patch into an error that I identified for them but they haven't established that the rest of their adjustment methodology is any good. The adjustments are not small. The adjustments that they make are fully equal to the total amount of warming in the United States the past century. So, you're dealing with adjustments that are the same size as the effect that you are trying to measure. So, it's worth spending a minute or two trying to understand exactly what they did. Now, my interest in these things is understanding exactly what they did. Now, they're point of view is well, Gavin Scmidt of NASA says well "I don't get this audit mean." What he calls the audit mean. Well you know, everyone in the world, if you aren't an academic and you're doing business offerings or you work in a company, you get audited. And you can't say to an auditor, here are the invoices, you do your own financial statements if you don't like ours. Then, the auditor says my only interest how you did yours. So, when Gavid Schmidt says well you don't think we've done an adjustment methodology, why don't you do your own calculation and you can publish it, try to publish it in peer-reviewed literature and we can start from there. My take is well, I've had other experiences with folks like that before and then they think if you mis-implemented their methodology they scream to high heaven. So, I said "No" and they said "You are asking to be spoon-fed" and I said "No, I'm not asking to be spoon-fed." I'll deal with raw code, it's just that the verbal descriptions in academic articles to not meet the kind of engineering, quality level that I expect from things or that I am looking for and that represents one point of dispute between me and them. They don't seem to accept the idea. This is an important issue and therefore academics have to stop being precious and arguing that these codes are their private property.

Q. If NASA were to handle this all better, or to your liking, what are some recommendations you'd give them?

One of the main recommendations I've consistently made both to NASA and to journals is that when people publish articles they should have to archive the data as they used it. The exact providence of their data if they downloaded it from an internet archive they should have to post the URL of the place where they got the data and the date they downloaded it so you can know the exact version they got in case the versions change. And, they should archive the code in which they obtained the calculations. This is not by any means an impossible or far-fetched set of protocols. In econometrics right now, if you want to get an article published in the American Economic Review, a leading journal, that's exactly what you have to do. That policy was instituted by the then-editor who is now chairman of the federal reserve system. It's a policy that is easy to implement and there is a lot more riding right now on climate policy than there is on labor market studies or studies of inflation. So, I think there's every reason to require NASA and other contributors to climate science to improve their game in terms of how they provide disclosure to other readers and other researchers of their methodology and data.

In some cases there are some real problems. You know Lonnie Thompson the ice guy has published sort of summaries of his data which are mutually inconsistent and I've tried to get original sample data to try and reconcile these and he's refused and he's published articles in journals and the journals have refused to require him to do it and the National Science Foundation which has funded it has refused to require it so it's not just NASA it's a very widespread problem in climate science right now.

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: tabatha.thompson-1@nasa.gov, robert.j.gutro@nasa.gov
Date: Thu, 16 Aug 2007 11:43:25 -0400
Subject: FW: Re: please verify
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GFiVMR364028

Hi Tabatha and Rob:

Here is the GISS statement...thanks. If you need anything else, let me know.

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 11:40:29 -0400
To: lesgiss@verizon.net
Subject: Re: please verify

That's fine - Reto

On Thu, 2007-08-16 at 11:31 -0400, lesgiss@verizon.net wrote:
> Hi Reto:
>
> Please verify this final version is okay:
>
> Researchers at NASA's Goddard Institute for Space Studies in New York
> recently revised their global temperature record after correcting a step in
> their data acquisition procedure. The prior process appropriately replaced
> some US station records with records adjusted for instrumental and
> procedural changes. However, it reverted to the unadjusted data after
> 1999, the last year for which the adjusted data were available. This
> resulted in a discontinuity in year 2000 for the US stations involved. The
> adjustments necessary to remove the discontinuity turned out to be positive
> for about half the stations and negative for the other half. The net effect
> of the prior flaw was to increase the mean US temperature by about 0.15C
> and global temperature by about 0.003C, changes that were within the margin
> of error. The researchers corrected the computer program and posted their
> revised data on 7 August 2007. More information is available here: (LINK TO

> GISS SITE).
>
> Thanks.
>
> Leslie
>
>
>
> ---
> mail2web - Check your email from the web at
> http://link.mail2web.com/mail2web
>
>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 10:47:59 -0400
To: rruedy@GISS.NASA.GOV

Hi Reto:

Thanks....so you think this is now agreed upon by all and can be sent to HQ???

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 10:46:20 -0400
To: lesgiss@verizon.net, jhansen@giss.nasa.gov, makis@giss.nasa.gov, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov
Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]

So here is an attempt to put the pieces together; I also adjusted the beginning and end to fit the other modifications; please don't hesitate to further improve my style:

Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record after correcting a step in their data acquisition procedure. That process appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, it reverted to the unadjusted data after 1999, the last year for which the adjusted data were available. This resulted in a discontinuity in year 2000 for the US stations involved. The necessary adjustments turned out to be positive for about half the stations and negative for the other half, so the effect was reduced to a jump of +.15C for the US means, and a jump of +.003C for the global means, well within the margin of error. The researchers corrected the computer program and posted their revised data. More information is available here: (LINK TO GISS SITE).

Reto

On Wed, 2007-08-15 at 21:53 -0400, James Hansen wrote:
> yes, those are fine
>
> On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>> This sounds much better but I think we should add:
>>
>> "for the period 1880-1999"
>>
>> at the end of the 1st sentence
>>
>> and
>>
>> "when the adjusted data ended"
>>
>> at the end of the 2nd sentence or something like that.
>>
>> Reto
>>
>> On Wed, 2007-08-15 at 18:45 -0400, James Hansen wrote:
>> > Here is my suggestion:

>
> The flawed program appropriately replaced some US station records with
> records adjusted for instrumental and procedural changes. However,
> the program reverted to unadjusted data for subsequent years. The
> result was...
>
> Jim
> On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Not sure about punctuation, but I added a "," before "as it
> was supposed
> to" - seems to improve legibility.
>
> Reto
>
> -------- Forwarded Message --------
> From: Reto Ruedy <rruedy@giss.nasa.gov>
> Reply-To: rruedy@giss.nasa.gov
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov,
> makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site
> Date: Wed, 15 Aug 2007 17:46:00 -0400
>
> It becomes clearer if we split that sentence into 2
> sentences:
>
> The flawed program replaced for some US stations the 1880-1999
> record by
> records adjusted for instrumentation and procedural changes,
> as it was
> supposed to. However, it used the original source for the
> years after
> 1999 without modifying them to fit the adjusted data. The
> result was ...
>
> Sorry for the long complicated sentence,

>
> ! Hope that makes it better.
>
> Reto
>
>
> On Wed, 2007-08-15 at 16:42 -0400, James Hansen wrote:
> > there must be something wrong with the second sentence --
> please
> > reread it Reto. Jim
> >
> > On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

> > Thanks, Reto.
> >
> > I spoke with Tabatha again..she said Jack Kaye
> suggested
> > adding the details
> > that the changes were to US stations only, and only
> > post-2000...
> >
> > Jim--if Reto's revisions, and Jack's are okay,
> please let me
> > know.
> >
> > Leslie
> > Original Message:
> > -----------------
> > From: Reto Ruedy rruedy@giss.nasa.gov
> > Date: Wed, 15 Aug 2007 15:24:29 -0400
> > To: jhansen@giss.nasa.gov, lesgiss@verizon.net,
> > ltravis@giss.nasa.gov,
> > robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note for Web
> Site
> >
> >
> > Here is my suggested revision:
> >
> > Researchers at NASA's Goddard Institute for Space
> Studies in
> > New York
> > recently revised information on their global
> temperature
> > record based on
> > corrected data. The program that replaced for some
> US stations
> > the
> > 1880-1999 record by records that were adjusted for
> > instrumentation and
> > procedural changes, used the original source for the
> later
> > years without
> > modifying them to fit the adjusted data. The result
> was a
> > discontinuity
> > in year 2000 for the US stations involved. Since the
> necessary
> > adjustment was positive for about half the stations
> and
> > negative for the

> > other half, the effect on US means was a
> discontinuity of
> > +.15C, and
> > of .003C for the global mean series. The
> researchers ...
> >
> > Reto
> >
> > On Wed, 2007-08-15 at 14:42 -0400, James
Hansen
> wrote:
> > > This seems fine to me. Reto or Makiko
may want to
> > comment. Jim
> > >
> > > On 8/15/07, lesgiss@verizon.net
> <lesgiss@verizon.net > wrote:
> > > > Hi Jim:
> > > >
> > > > This is the draft statement
prepared by
> Tabatha
> > Thompson, of
> > > > HQ PAO, and
> > > > submitted to Jack Kaye....is
this okay
> with you?
> > >
> > > > Thanks.
> > > >
> > > > Leslie
> > > >
> > > >
> > > > Original Message:
> > > > ----------
> > > > From: Thompson, Tabatha
(HQ-NB000)
> > Tabatha.Thompson-1@nasa.gov
> > > > Date: Wed, 15 Aug 2007 14:24:47
-0400
> > > > To: leslie.m.mccarthy@nasa.gov
> > > > Subject: FW: Per our Discussion
- Note for
> Web Site
> > >
> > >
> > > > How does this look to you?
> > >
> > > > >
>
> > > > > From: Thompson,
Tabatha
> (HQ-NB000)
> > > > > Sent: Wednesday, August 15,
2007 11:57
> AM
> > > > > To: Kaye, Jack A. (HQ-DK000)
> > > > > Subject: Per our
Discussion - Note
> for Web
> > Site
> > > > >
> > > > > Jack,

> > > > Per our discussion, please review the
> following
> > statement.
> > > Once I hear
> > > > from you, I'll send it to our web
> people.
> > > > ttt
> > > > Researchers at NASA's Goddard Institute
> for Space
> > Studies in
> > > New York
> > > > recently revised information on their
> global
> > temperature
> > > record based
> > > > on corrected data. The computer modeling
> program
> > that
> > > generated the
> > > > temperature record was produced with the
> > assumption that
> > > data from
> > > > monitoring stations would be adjusted to
> account
> > for changes
> > > such as
> > > > the time of day at which measurements
> were made.
> > However,
> > > the adjusted
> > > > data were not always readily available
> and the
> > program used
> > > data from
> > > > monitoring stations that had not been
> adjusted.
> > The result
> > > was a
> > > > discontinuity in temperature variance in
> 2000. The
> > > researchers have
> > > > corrected the computer program and
> posted their
> > revised
> > > data. More
> > > > information is available here: (LINK TO
> GISS
> > SITE).
> > > >
> > > >

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>

> > > mail2web - Check your email from the web
> at
> > >
http://link.mail2web.com/mail2web
> > >
> > >
> > >
> > >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
> >
> >
>

> > mail2web.com â€" What can On Demand Business Solutions
> do for
> > you?
> >
http://link.mail2web.com/Business/SharePoint
> >
> > >
> > >
> > >
> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

---

mail2web.com - What can On Demand Business Solutions do for you?
http://link.mail2web.com/Business/SharePoint

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 11:31:53 -0400
Subject: please verify
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GFXoMQ360124

Hi Reto:

Please verify this final version is okay:

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Thanks.

Leslie

Subject: FW: McIntyre Interview
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 11:27:19 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov, ltravis@giss.nasa.gov
CC: dcain@giss.nasa.gov, robert.j.gutro@nasa.gov

Hi to all:

Dr. McIntyre gave an interview to an organization called TownHall.com in which he alleges that NASA blocked his IP address and that because of 1.5 million hits/month on his website, NASA retreated from its position. She wants to know if this is an accurate retelling of what occurred?

The attachment is her ENTIRE 4 page interview which details in greater length the timeline and interactions with GISS....

Thanks.

Leslie

Original Message:

From: Amanda Carpenter amanda.carpenter@townhall.com
Date: Thu, 16 Aug 2007 11:11:31 -0400
To: Leslie.M.McCarthy@nasa.gov
Subject: McIntyre Interview

Hi, Leslie.
I've attached the complete version of the interview, but this is the part I was looking for comment on. Basically, I'd just like to know if this is true and explanation of what really went on here.

Thanks!!!

Here it is:

McIntyre:I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?

Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitively downloading data. Anyway, even after I was blocked and I

explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

Steve McIntyre interview on August 15, 2007.doc	**Content-Description:**	Steve McIntyre interview on August 15, 2007.doc
	Content-Type:	application/octet-stream
	Content-Encoding:	base64

Steve McIntyre interview on August 15, 2007
Over the phone 4:30 pm

Q. Can you explain to me in layman's terms how you found this error?

Yeah. Quickly, a fellow in California named Anthony Watts noticed that some of the weather stations used to make historical U.S. statistics were located in places they weren't supposed to be. One of them was in a parking lot and the trend for the station in a parking lot was way up and a nearby station that was in a proper location in a rural area was relatively flat. So, this led to some controversy and he started a volunteer effort where people started surveying these weather stations and seeing what they looked like.

Now, defenders of the weather station system argued that NASA had software that could fix that data. And, so it really didn't matter if the station was in a parking lot in Tuscan or something like that. NASA software could fix it. So, that type of adjustment is a statistical issue that interests me. And, so I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?
Well, first of all they probably weren't used to, they don't have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitivel downloading data. Anyway, even after I was blocked and I explained myself they still didn't want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Once they did that, I downloaded all 1200 stations and calculated the value of this step in the year 2000. In some cases it was a negative step and in some cases it was a positive step, but it became clear that what they had done they had, for some reason, changed the

version of data that they were using in 2000. Before 2000 they were using an adjusted version of data and after 2000 they were using an unadjusted version.
After the controversy broke out NASSA has said that the reason they did that was because the adjusted version was never available after 2000. That's actually untrue. The adjusted version is sitting in exactly the same data directory. It just seems to be an error of some kind on their part.

The amount on individual stations and this is where we started, trying to explain problems with individual stations, had jumps of up to one degree centigrade. I calculated a distribution of these jumps for all 1200 stations. Many of the jumps were negative, but the number of small jumps was itself only a fraction. Probably 75 percent of the stations had jumps of at least a quarter degree in the year 2000. But the average, because there both positive and negative ended up being somewhat over .15 degrees. That doesn't necessarily seem that much, but when the entire increase in temperature in the United States had been previously reported to be about half a degree, this .15 degree is not a small number when you are measuring half degree numbers.

So, I sent them an email notifying them of this error on Saturday August 4th and I pointed out that I thought they had changed data sources and on Tuesday August 7th they sent me a note agreeing that there was an error and they had, when I looked at their website, they had replaced the data for all1200 U.S. historical weather stations and they'd also replaced their U.S. temperature history. While they added a mention of me on their webpage describing their methodology, but didn't provide any notice to readers that they had replaced all this data. So, for example, if you had been doing a study which required that you knew what the temperature was in Reno there was no notice that the data you'd had downloaded prior to August 2007 had contained an error. And in some cases a very large error.

When I looked at what their restated U.S. temperature history was, I noticed there as a change in the leading years. So, I wrote a light-hearted post on my blog that said there's a change in the leader board at the U.S. Open and that even though people thought that the years 1934 and the years 1998 had been in the clubhouse and had a shower, in fact they were still on the course and that 1934 had a late birdie and 1998 hate a late bogie and 2006 had a late-triple bogie and when the dust settled 1934 was now the leader of the U.S. Open

Q. It seems at the heart of this was that NASA was unwilling to give you the methodology?

There are a couple of layers of issues. One issue was that they had an error. After I had identified this particular error to them and asked them for their source code so I could see how the rest of their adjustments actually worked, and this was really kind of an incidental point in checking their adjustment process. One of the things I started from was trying to evaluate whether their adjustment process was equal in adjusting bad data. One of the things I think you can conclude from this exercise is that there adjustment software was obviously incapable of picking up fictionist jumps even as big as one

degree centigrade in the year 2000 and the proof was in the pudding because they hadn't picked it up. In fact, they hadn't only failed to fix it, they created it. So, the claim that they're adjustment methodology was capable of fixing bad data, I mean, that's the point I want people to take home from this. What they've done now is inserted a patch into an error that I identified for them but they haven't established that the rest of their adjustment methodology is any good. The adjustments are not small. The adjustments that they make are fully equal to the total amount of warming in the United States the past century. So, you're dealing with adjustments that are the same size as the effect that you are trying to measure. So, it's worth spending a minute or two trying to understand exactly what they did. Now, my interest in these things is understanding exactly what they did. Now, they're point of view is well, Gavin Scmidt of NASA says well "I don't get this audit mean." What he calls the audit mean. Well you know, everyone in the world, if you aren't an academic and you're doing business offerings or you work in a company, you get audited. And you can't say to an auditor, here are the invoices, you do your own financial statements if you don't like ours. Then, the auditor says my only interest how you did yours. So, when Gavid Schmidt says well you don't think we've done an adjustment methodology, why don't you do your own calculation and you can publish it, try to publish it in peer-reviewed literature and we can start from there. My take is well, I've had other experiences with folks like that before and then they think if you mis-implemented their methodology they scream to high heaven. So, I said "No" and they said "You are asking to be spoon-fed" and I said "No, I'm not asking to be spoon-fed." I'll deal with raw code, it's just that the verbal descriptions in academic articles to not meet the kind of engineering, quality level that I expect from things or that I am looking for and that represents one point of dispute between me and them. They don't seem to accept the idea. This is an important issue and therefore academics have to stop being precious and arguing that these codes are their private property.

Q. If NASA were to handle this all better, or to your liking, what are some recommendations you'd give them?

One of the main recommendations I've consistently made both to NASA and to journals is that when people publish articles they should have to archive the data as they used it. The exact providence of their data if they downloaded it from an internet archive they should have to post the URL of the place where they got the data and the date they downloaded it so you can know the exact version they got in case the versions change. And, they should archive the code in which they obtained the calculations. This is not by any means an impossible or far-fetched set of protocols. In econometrics right now, if you want to get an article published in the American Economic Review, a leading journal, that's exactly what you have to do. That policy was instituted by the then-editor who is now chairman of the federal reserve system. It's a policy that is easy to implement and there is a lot more riding right now on climate policy than there is on labor market studies or studies of inflation. So, I think there's every reason to require NASA and other contributors to climate science to improve their game in terms of how they provide disclosure to other readers and other researchers of their methodology and data.

Subject: Times newspaper in UK
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 11:45:41 -0400
To: rruedy@giss.nasa.gov

The reporter for the Times in London is

Lewis Smith

0044 207-782-5558

He would like to speak to someone within the next hour...

I also got a call from a call from the Mail in London...which I sent to Gavin..but I have not heard from him...

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: gschmidt@giss.nasa.gov
Date: Thu, 16 Aug 2007 12:00:42 -0400
Subject: Re: FW: Goddard Institute
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GG26MT374331

Also just got a call from The Times in London...which I gave to Reto..

What do you want to do with The Mail???

Original Message:

From: Gavin Schmidt gschmidt@giss.nasa.gov
Date: Thu, 16 Aug 2007 11:41:44 -0400 (EDT)
To: lesgiss@verizon.net
Subject: Re: FW: Goddard Institute

This will be a very anti GW piece, the MoS is notoriously skewed - Talking to them is not going to help...

Gavin

| Gavin Schmidt NASA/Goddard Institute for Space Studies |
| 2880 Broadway |
| Tel: (212) 678 5627 New York, NY 10025 |
| |
| gschmidt@giss.nasa.gov http://www.giss.nasa.gov/~gavin |

On Thu, 16 Aug 2007, lesgiss@verizon.net wrote:

> Hi Gavin:
>
> This is the inquiry I left you a voice mail on....will you let me know if
> you have time to speak with him or exchange emails?
>
> Thanks.
>
> Leslie
>
>
>

> Original Message:
> ----------
> From: martin.delgado@mailonsunday.co.uk
> Date: Thu, 16 Aug 2007 14:33:33 +0000
> To: leslie.m.mccarthy@nasa.gov
> Subject: Goddard Institute
>
>
>
> Leslie,
> As discussed a moment ago, here are my contact details at the Mail on
> Sunday.
> 00-44-207-938-7109 or 00-44-207-938-7400.
> Cellphone:
> A couple of points I'd like to cover:
> What is the likelihood that other countries (the UK, for example) are
> making similar statistical 'errors' in their temperature calculations?
> Does NASA accept that the McIntyre controversy helps the cause of global
> warming 'sceptics'.
> How can an organisation as powerful and well-resourced as NASA make such a
> mistake?
>
> Thank you for your help.
> Martin Delgado
> Reporter, Mail on Sunday
>
>
>

>
>

>

>
>
>

Subject: draft McIntyre statement
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 12:20:00 -0400
To: rruedy@giss.nasa.gov

Hi Reto:

I have not heard from Jim about the McIntyre allegations of cutting off his IP address...but drafted this short response...what do you think???

On May 16, 2007, an IP address attached to a cable.rogers.com network made 16,000 attempts in several hours to scrape GISTEMP station data. The webmaster had noted that this large volume was dramatically slowing access to the site and data by other users. That address was blocked by the GISS webmaster as it violated rules from using web robots to access off-limits directories. The webmaster had no idea of the identity of the user until Dr. McIntyre emailed the webmaster. He was then advised of the reason for his service denial and advised to contact the GISTEMP research group to explain data needs. On the 17th, Dr. McIntyre again inquired about his access and was again advised to contact the GISTEMP group. Dr. Reto Ruedy of the GISTEMP group contacted Dr. McIntyre to discuss his requests.

(need to add in details about his requests to provide data and/or in a format that we don't have—Reto??)

Shortly after that email exchange, Dr. McIntyre was advised that he could again begin downloading provided that he accepted generally accepted protocols, i.e. doing so at times so as to not adversely affect other users (late nights, weekends, etc.).

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: martin.delgado@mailonsunday.co.uk
Date: Thu, 16 Aug 2007 12:42:29 -0400
Subject: RE: Goddard Institute
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GGh4Md390066

Good afternoon.

Dr. Gavin Schmidt is available to speak with you. You can reach him at

Thanks.

Leslie McCarthy
NASA GISS

Original Message:

From: martin.delgado@mailonsunday.co.uk
Date: Thu, 16 Aug 2007 14:33:33 +0000
To: leslie.m.mccarthy@nasa.gov
Subject: Goddard Institute

Leslie,
As discussed a moment ago, here are my contact details at the Mail on Sunday.
00-44-207-938-7109 or 00-44-207-938-7400.
Cellphone:
A couple of points I'd like to cover:
What is the likelihood that other countries (the UK, for example) are making similar statistical 'errors' in their temperature calculations?
Does NASA accept that the McIntyre controversy helps the cause of global warming 'sceptics'.
How can an organisation as powerful and well-resourced as NASA make such a mistake?

Thank you for your help.
Martin Delgado
Reporter, Mail on Sunday

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: robert.j.gutro@nasa.gov
Date: Thu, 16 Aug 2007 12:43:29 -0400
Subject: two more for weekly
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GGi3MW394907

Dr. Reto Ruedy
Lewis Smith
The Times--London
GISTEMP data changes

Dr. Gavin Schmidt
Martin Delgado
Mail On Sunday--London
GISTEMP data changes

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: jhansen@giss.nasa.gov, @gmail.com
Cc: dcain@giss.nasa.gov
Date: Thu, 16 Aug 2007 16:24:08 -0400
Subject: response on McIntyre IP claims??
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id I7GKPVMR475528

Hi Jim:

Amanda Carpenter of Townhall.com has inquired if we will have a response to McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.

Thanks.

Leslie

Subject: response on McIntyre IP claims??
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 16:24:08 -0400
To: jhansen@giss.nasa.gov, @gmail.com
CC: dcain@giss.nasa.gov

Hi Jim:

Amanda Carpenter of Townhall.com has inquired if we will have a response to McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.

Thanks.

Leslie

Subject: Re: response on McIntyre IP claims??
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 17:11:29 -0400
To: jhansen@giss.nasa.gov, lesgiss@verizon.net, @gmail.com, dcain@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov

I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.

Take a look at it...I'm also sending it to Reto and Gavin as well.

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Thu, 16 Aug 2007 16:33:28 -0400
To: lesgiss@verizon.net, @gmail.com, dcain@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??

Do we want to lower ourselves to debating with a court jester? Of course, that is what he wants.

I don't have a strong preference as long as it is not taking a significant amount of my time.

I have not read the stuff that you are referring to, but as I recall, as soon as I was told about the matter, I said that he was welcome to the data.

Jim

On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

> Hi Jim:
>
> Amanda Carpenter of Townhall.com has inquired if we will have a response to
> McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.
>
> Thanks.
>
> Leslie
>
> ---
> mail2web.com - What can On Demand Business Solutions do for you?
> http://link.mail2web.com/Business/SharePoint

---
mail2web.com - Enhanced email for the mobile individual based on Microsoft® Exchange - http://link.mail2web.com/Personal/EnhancedEmail

Attachment Converted: "c:\progra~1\qualcomm\eudora\attach\mcintyre isp 08-15-07.doc"

Subject: FW: [Fwd: RE: Access to GISTEMP]
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 17:18:34 -0400
To: jhansen@giss.nasa.gov

Jim--here is the email exchange, forwarded by Reto, between McIntyre-Robert-Reto...

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 11:23:12 -0400
To: lesgiss@verizon.net
Subject: [Fwd: RE: Access to GISTEMP]

Jim's email just came in - he changed one sentence (obviously he did not like my "jumps") - fine with me.

Below is the whole interaction as far as access questions are concerned.

Reto

-------- Forwarded Message --------
From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
To: rruedy@giss.nasa.gov
Subject: RE: Access to GISTEMP
Date: Thu, 17 May 2007 18:03:28 -0400

Thank you for this. I will observe this condition.

I realize that you have provided some documentation of what you did. In econometrics, it is a condition of publication in journals that authors archive their code and data so that their results can be routinely replicated. I realize that no such standards apply to climate science. However, equally, there is no prohibition on individual climate scientists voluntarily adopting these best practice standards. In that spirit, I would appreciate it if I could inspect the code used to process the GHCN data. Thanks, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Thursday, May 17, 2007 5:41 PM
To: Steve McIntyre
Cc: rschmunk@giss.nasa.gov
Subject: RE: Access to GISTEMP

After a short meeting with Dr. Hansen, we were advised to let you download whatever you want as long as generally accepted protocols are observed. Please try to do so at a time that does not impact other users, i.e. late nights, weekends.

What we did with the GHCN data is carefully documented in the publications listed on our website. We are not creating an alternate version of the GHCN data, we are mainly combining their data in various steps to create our anomaly maps.

Sincerely,

Reto A. Ruedy

On Thu, 2007-05-17 at 16:37 -0400, Steve McIntyre wrote:
> In answer to your question, I'm interested in the data as it is presented to the public. All I was doing was downloading the data that is supposedly available to the public, but in a way that would not take 4 weeks of manual labor. If your version differs from the GHCN version, I'm interested in downloading your version so that I can assess the differences.
>
> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Thursday, May 17, 2007 4:14 PM
> To: Steve McIntyre
> Cc: 'Robert B. Schmunk'
> Subject: RE: Access to GISTEMP
>
> Dear Steve,
>
> Our main focus working with observed data is creating a gridded set of temperature anomalies which gives reasonable means over comparatively large regions - the global mean average being one of the major goals. If you are interested in individual stations, you are much better off working directly with the GHCN data.
>
> Our station data are really intermediate steps to obtain a global anomaly map, and are not to be viewed as an end result. A modified time series for a particular location may be more representative for the surrounding region than for that particular location. So it is important to use these data in the proper context.
>
> All our publications and investigations deal with regional temperature anomalies and that is the only use these data are good for after our modifications.
>
> If you still think that downloading our "scratch pads" is important to your investigations, please let me know exactly what stage after the raw GHCN data you need and maybe an indication why you need it, and I'll try to provide you with the necessary data.
>
> Again, we are not trying to compete with GHCN as provider of station data; we are using their data for a very specific project and we made -
>
> perhaps unwisely - some of our tools that we used to test the various steps of our process available on the web.
>
> Reto

> On Thu, 2007-05-17 at 15:18 -0400, Steve McIntyre wrote:
> > I know how to use the GHCN data. I'm not interested in "tips" on how to
> > use it.
> >
> > I'm interested in the versions as used by GISS. The GHCN version is
> > convenient to download and I see no reason why GISS versions should not
> > be available on equivalent terms.
> >
> > Steve McIntyre
> >
> > -----Original Message-----
> > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > Sent: Thursday, May 17, 2007 2:58 PM
> > To: Steve McIntyre
> > Subject: Re: Access to GISTEMP
> >
> > Please contact the GISTEMP group and inquire if they are
> > willing to provide you with the dataset(s) from which the
> > website applications extract information.
> >
> > If they are not (I do not know what their current policy
> > on this), then you can go a step closer to the source and
> > obtain station data from the same location that the GISTEMP
> > group obtains the original "raw" datasets that they work
> > from. That is the Global Historical Climatology Network at
> > http://www.ncdc.noaa.gov/oa/climate/ghcn-monthly/index.php
> >
> > I'm not sure which specific files from the GHCN site are
> > used. But if the complete GISTEMP data are not available
> > then perhaps Dr. Ruedy of the GISTEMP group could give you
> > some tips on how to use the GHCN data.
> >
> > rbs
> >
> > On May 17, 2007, at 14:46, Steve McIntyre wrote:
> >
> > > How can I download the data then?
> > >
> > > -----Original Message-----
> > > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > > Sent: Thursday, May 17, 2007 2:35 PM
> > > To: Steve McIntyre
> > > Cc: Reto Ruedy
> > > Subject: Re: Access to GISTEMP
> > >
> > > On May 16, 2007, at 23:44, Steve McIntyre wrote:
> > >
> > > > I am blocked from access to the page where the email addresses are
> > > > located.
> > >
> > > Good point. That was foolish of me to suggest checking a

page on which access had been turned off.

I have turned off the restriction that I added to the server on data.giss.nasa.gov last night so that you can access the GISTEMP page and view the contact information.

I have been attempting to collate station data for scientific purposes.
I have not been running a robot but have been running a program in R that collects station data.

It is an automated process scraping content from the website, and if that isn't what a web robot does, then it's close enough.

rbs

-----Original Message-----
From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
Sent: Wednesday, May 16, 2007 11:33 PM
To: Steve McIntyre
Cc: Reto Ruedy
Subject: Re: Access to GISTEMP

Steve,

Although you did not provide any further details about your problem, I will assume that you are the person on the cable.rogers.com network who has been running a robot for the past several hours trying to scrape GISTEMP station data and who has made over 16000 (!) requests to the data.giss.nasa.gov website.

Please note that the robots.txt file on that website includes a list of directories which any legitimate web robot is forbidden from trying to index. That list of off-limits directories includes the */work/* and */cgi-bin/* directories.

Because the robot running on the cable.rogers.com network has rather obviously and blatantly violated those rules, I placed a block on our server restricting its access to the server.

If you are indeed the person who has been running that particular web robot, and if you do need access to some large amount of the GISTEMP station data for a scientific purpose, then you should contact the GISTEMP research group to explain your needs. E-mail addresses for the GISTEMP research group are located at the bottom of the page at http://data.giss.nasa.gov/gistemp/

> rbs
>
> On May 16, 2007, at 23:17, Steve McIntyre wrote:
>
> > When I try to access GISS station files,
> > http://data.giss.nasa.gov/
> > gistemp/station_data/
> > I am getting the following diagnostic:
> >
> > Forbidden
> > You don't have permission to access */gistemp/station_data/* on
> > this
> > server.
> > Apache/2.0.52 (Unix) Server at data.giss.nasa.gov Port 80
> >
> > --
> > Robert B. Schmunk, rschmunk@giss.nasa.gov
> > NASA Goddard Institute for Space Studies, 2880 Broadway, New
> > York,
> > NY
> > 10025
> >
> > --
> > Robert B. Schmunk, rschmunk@giss.nasa.gov
> > NASA Goddard Institute for Space Studies, 2880 Broadway, New York,
> > NY
> > 10025
> >
> > --
> > Robert B. Schmunk, rschmunk@giss.nasa.gov
> > NASA Goddard Institute for Space Studies, 2880 Broadway, New York,
> > NY
> > 10025
> >
> > --

Reto Ruedy <rruedy@giss.nasa.gov>

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From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 17:18:34 -0400
To: jhansen@giss.nasa.gov

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Leslie

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Sincerely,

Reto A. Ruedy

On Thu, 2007-05-17 at 16:37 -0400, Steve McIntyre wrote:
> In answer to your question, I'm interested in the data as it is presented to the public. All I was doing was downloading the data that is supposedly available to the public, but in a way that would not take 4 weeks of manual labor. If your version differs from the GHCN version, I'm interested in downloading your version so that I can assess the differences.
>
> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Thursday, May 17, 2007 4:14 PM
> To: Steve McIntyre
> Cc: 'Robert B. Schmunk'
> Subject: RE: Access to GISTEMP
>
> Dear Steve,
>
> Our main focus working with observed data is creating a gridded set of temperature anomalies which gives reasonable means over comparatively large regions - the global mean average being one of the major goals. If you are interested in individual stations, you are much better off working directly with the GHCN data.
>
> Our station data are really intermediate steps to obtain a global anomaly map, and are not to be viewed as an end result. A modified time series for a particular location may be more representative for the surrounding region than for that particular location. So it is important to use these data in the proper context.
>
> All our publications and investigations deal with regional temperature anomalies and that is the only use these data are good for after our modifications.
>
> If you still think that downloading our "scratch pads" is important to your investigations, please let me know exactly what stage after the raw GHCN data you need and maybe an indication why you need it, and I'll try to provide you with the necessary data.
>
> Again, we are not trying to compete with GHCN as provider of station data; we are using their data for a very specific project and we made - perhaps unwisely - some of our tools that we used to test the various steps of our process available on the web.
>
> Reto

> On Thu, 2007-05-17 at 15:18 -0400, Steve McIntyre wrote:
> > I know how to use the GHCN data. I'm not interested in "tips" on how to
> > use it.
> >
> > I'm interested in the versions as used by GISS. The GHCN version is
> > convenient to download and I see no reason why GISS versions should not
> > be available on equivalent terms.
> >
> > Steve McIntyre
> >
> >
> > -----Original Message-----
> > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > Sent: Thursday, May 17, 2007 2:58 PM
> > To: Steve McIntyre
> > Subject: Re: Access to GISTEMP
> >
> >
> > Please contact the GISTEMP group and inquire if they are
> > willing to provide you with the dataset(s) from which the
> > website applications extract information.
> >
> > If they are not (I do not know what their current policy
> > on this), then you can go a step closer to the source and
> > obtain station data from the same location that the GISTEMP
> > group obtains the original "raw" datasets that they work
> > from. That is the Global Historical Climatology Network at
> > http://www.ncdc.noaa.gov/oa/climate/ghcn-monthly/index.php
> >
> > I'm not sure which specific files from the GHCN site are
> > used. But if the complete GISTEMP data are not available
> > then perhaps Dr. Ruedy of the GISTEMP group could give you
> > some tips on how to use the GHCN data.
> >
> > rbs
> >
> >
> >
> > On May 17, 2007, at 14:46, Steve McIntyre wrote:
> >
> > > How can I download the data then?
> > >
> > > -----Original Message-----
> > > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > > Sent: Thursday, May 17, 2007 2:35 PM
> > > To: Steve McIntyre
> > > Cc: Reto Ruedy
> > > Subject: Re: Access to GISTEMP
> > >
> > >
> > > On May 16, 2007, at 23:44, Steve McIntyre wrote:
> > >
> > > > I am blocked from access to the page where the email addresses are
> > > > located.
> > >
> > > Good point. That was foolish of me to suggest checking a

page on which access had been turned off.

I have turned off the restriction that I added to the server on data.giss.nasa.gov last night so that you can access the GISTEMP page and view the contact information.

I have been attempting to collate station data for scientific purposes.
I have not been running a robot but have been running a program in R that collects station data.

It is an automated process scraping content from the website, and if that isn't what a web robot does, then it's close enough.

rbs

-----Original Message-----
From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
Sent: Wednesday, May 16, 2007 11:33 PM
To: Steve McIntyre
Cc: Reto Ruedy
Subject: Re: Access to GISTEMP

Steve,

Although you did not provide any further details about your problem, I will assume that you are the person on the cable.rogers.com network who has been running a robot for the past several hours trying to scrape GISTEMP station data and who has made over 16000 (!) requests to the data.giss.nasa.gov website.

Please note that the robots.txt file on that website includes a list of directories which any legitimate web robot is _forbidden_ from trying to index. That list of off-limits directories includes the */work/* and */cgi-bin/* directories.

Because the robot running on the cable.rogers.com network has rather obviously and blatantly violated those rules, I placed a block on our server restricting its access to the server.

If you are indeed the person who has been running that particular web robot, and if you do need access to some large amount of the GISTEMP station data for a scientific purpose, then you should contact the GISTEMP research group to explain your needs. E-mail addresses for the GISTEMP research group are located at the bottom of the page at http://data.giss.nasa.gov/gistemp/

rbs

On May 16, 2007, at 23:17, Steve McIntyre wrote:

> When I try to access GISS station files,
> http://data.giss.nasa.gov/
> gistemp/station_data/
> I am getting the following diagnostic:
>
> Forbidden
> You don't have permission to access */gistemp/station_data/* on this
> server.
> Apache/2.0.52 (Unix) Server at data.giss.nasa.gov Port 80
>
> --
> Robert B. Schmunk, rschmunk@giss.nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York,
> NY
> 10025
>
> --
> Robert B. Schmunk, rschmunk@giss.nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York,
> NY
> 10025
>
> --
> Robert B. Schmunk, rschmunk@giss.nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York,
> NY
> 10025
>
> --

Reto Ruedy <rruedy@giss.nasa.gov>

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: amanda.carpenter@townhall.com
Date: Thu, 16 Aug 2007 17:40:24 -0400
Subject: RE: checking in
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GLfIMX511136

Hello:

Yes, I did...working a response...

Thanks.

Leslie McCarthy

Original Message:

From: Amanda Carpenter amanda.carpenter@townhall.com
Date: Thu, 16 Aug 2007 14:32:06 -0400
To: Leslie.M.McCarthy@nasa.gov
Subject: checking in

Just wanted to make sure you got my email earlier today.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

Subject: FW: [Fwd: Re: response on McIntyre IP claims??]
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 16 Aug 2007 20:06:21 -0400
To: jhansen@giss.nasa.gov, @gmail.com

Jim...could you take a look at Gavin's edits and see if you approve? Reto has signed off...

Thanks. Getting any sense whether this is now dead and buried, or still breathing??? Any idea who made the Congressional inquiry?

Leslie
Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 18:36:55 -0400
To: lesgiss@verizon.net
Subject: [Fwd: Re: response on McIntyre IP claims??]

Leslie,

Sorry that my response by mistake only was sent to Gavin. So below is what I wrote and above it Gavin's response. I don't think Jim is interested in hearing any more about it.

Reto

-------- Forwarded Message --------
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
To: rruedy@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??
Date: 16 Aug 2007 18:16:22 -0400

the issue is here that you are dealing with a hostile interviewer. In such circumstances, it is much better simply to point out clear errors. If you open up another front they will dive on that instead and abandon all the previous positions (since they are not sincere in any case).

It does however highlight the rhetorical power of saying that the code is secret and things are being kept from the public. It may still be worth putting up a clean version of the adjustment program on the website in order to have something to point to in such cases.

gavin

On Thu, 2007-08-16 at 18:08, Reto Ruedy wrote:
> Gavin,
>
> So you don't think it is worth to point out that the whole first part of the interview section below is a total fabrication, and his first request for source code came with the "thank you" note mentioned at the end of the response, still May 17. Also, his reasons for our "reluctance" is wild speculation that is light years away from reality.
>
> On second thought, it's not worth going into these details, especially in a case where the interviewer is more likely to believe Steve than us.

So, I'm fine with the edits.

Reto

On Thu, 2007-08-16 at 17:31 -0400, Gavin Schmidt wrote:
a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.

gavin

On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:
I agree...but in this case we are in the right. I think we should just
make the point clear that McIntyre's story is a fabrication in a very generic way.

Take a look at it...I'm also sending it to Reto and Gavin as well.

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Thu, 16 Aug 2007 16:33:28 -0400
To: lesgiss@verizon.net, @gmail.com, dcain@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??

Do we want to lower ourselves to debating with a court jester? Of course,
that is what he wants.

I don't have a strong preference as long as it is not taking a significant
amount of my time.

I have not read the stuff that you are referring to, but as I recall, as
soon as I was told about the matter, I said that he was welcome to the data.

Jim

On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

Hi Jim:

Amanda Carpenter of Townhall.com has inquired if we will have a response
to
McIntyre's claims in their interview yesterday that NASA blocked his IP

address? I've heard from both Reto and Robert and can draft something if you want...please let me know.

Thanks.

Leslie

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Town Hall Story on NASA blocking McIntyre access
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 17 Aug 2007 07:37:44 -0400
To: jhansen@giss.nasa.gov, @gmail.com, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov
CC: dcain@giss.nasa.gov, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

Good morning:

Here is the Town Hall story entitled "NASA Blocked Climate Change Blogger from Data"...

http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true

Leslie

Reply-To: lesgiss@verizon.net
X-Originating-IP:
X-URL: http://mail2web.com/
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
To: tabatha.thompson-1@nasa.gov
Cc: robert.j.gutro@nasa.gov
Date: Fri, 17 Aug 2007 07:58:22 -0400
Subject: Town Hall story on McIntyre
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7HBxLMX876208

Hi Tabatha:

Received a call from this reporter yesterday from TownHall.com seeking NASA comment on whether Steve McIntyre was blocked from retrieving NASA data. I did tell her at the end of the work day we were still working a statement (it had been approved by Reto Ruedy and Gavin Schmidt, but not yet by Jim Hansen)...

http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true

His IP address was blocked for HUGE volume of hits...without the webmaster having any idea who he was. Within a day, in an exchange of emails about clarification over his needs, he was restored. This was a routine denial of service, as the webmaster has done with others in the past.... Its spelled out in a bit more detail in the statement...

Thanks.

Leslie

Subject: Re: response on McIntyre IP claims??
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Fri, 17 Aug 2007 11:09:54 -0400
To: jhansen@giss.nasa.gov

Hi..thanks.

I was going to give it just to Amanda Carpenter of Townhall.com who asked yesterday...but she ran her article with the lie in the headline already....I sent it to you..did you see it? Do you still want me to send it to her???

I saw reading some of the blogs this morning that your email of yesterday was already being quoted...how big is your email distribution list? Wondering if many who are now on it are contrarians...no longer a list of truly interested parties in your research and observations...

Enjoy the beautiful weekend..

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Fri, 17 Aug 2007 10:59:56 -0400
To: gschmidt@giss.nasa.gov, lesgiss@verizon.net, @gmail.com, dcain@giss.nasa.gov, rruedy@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??

I agree that the shortened version is better. What are you going to do with this?

On 16 Aug 2007 17:31:31 -0400, Gavin Schmidt <gschmidt@giss.nasa.gov> wrote:

> a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.
>
> gavin
>
> On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:

I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.

Take a look at it...I'm also sending it to Reto and Gavin as well.

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Thu, 16 Aug 2007 16:33:28 -0400
To: lesgiss@verizon.net, @gmail.com, dcain@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??

Do we want to lower ourselves to debating with a court jester? Of course,
that is what he wants.

I don't have a strong preference as long as it is not taking a significant
amount of my time.

I have not read the stuff that you are referring to, but as I recall, as soon as I was told about the matter, I said that he was welcome to the data.

Jim

On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

> Hi Jim:
>
> Amanda Carpenter of Townhall.com has inquired if we will have a response
> to
> McIntyre's claims in their interview yesterday that NASA blocked his IP
> address? I've heard from both Reto and Robert and can draft something if
> you want...please let me know.
>
> Thanks.
>
> Leslie
>
> ---
> mail2web.com What can On Demand Business Solutions do for you?
> http://link.mail2web.com/Business/SharePoint

---
mail2web.com Enhanced email for the mobile individual based on

Microsoft(r)
Exchange - http://link.mail2web.com/Personal/EnhancedEmail

We keep and use information in line with the Data Protection Act 1998. We may release this personal information to other UK government departments and public authorities.

Please note that all messages sent and received by members of the Foreign & Commonwealth Office and its
missions overseas may be monitored centrally. This is done to ensure the integrity of the system.

****
****

Subject: FW: BBC TV series
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 22 Aug 2007 16:40:10 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov, dshindell@giss.nasa.gov, rruedy@giss.nasa.gov
CC: dcain@giss.nasa.gov, robert.j.gutro@nasa.gov

Good afternoon, gentlemen:

See the below invitation to participate in TV programming by the BBC "looking at the effects of artificial chemicals (all things toxic!) on our environment on a global scale."

Please let me know if you have an interest in speaking/emailing with Mr. Morgan, and possibly participating in the project.

Thanks.

Leslie

Original Message:

From: James Morgan-GW James.Morgan3@bbc.co.uk
Date: Wed, 22 Aug 2007 21:00:21 +0100
To: Leslie.M.McCarthy@nasa.gov
Subject: BBC TV series

Dear Lesley,

> I am a researcher from the BBC, in the UK. I am developing a landmark television series, looking at the effects of artificial chemicals (all things toxic!) on our environment on a global scale.
> It will be the ultimate global health check - an update on where we stand now, 45 years since Rachel Carson wrote her influential and controversial book Silent Spring. Using similar headings as Carson for the chapters in her book, the six episodes will be as follows:
>
> Planet
> Oceans (and Rivers)
> Humans
> Insects, Soils and Funghi
> Animals, Birds & Fish
> Our Green Mantle (trees, plants etc)

Regarding the first episode, "Planet", I am keen to speak to NASA scientists who are using satellites to measure atmospheric pollution from space. Your colleague Rob, in the Goddard media relations office, has recommended four scientists, who you may be able to put me in touch with:

James Hansen
Drew Schindel
Gavin Schmidt
Reto Reudy

> I am keen to get a clear and informed idea of how the Earth has changed in the past four decades, how NASA is measuring these changes, and how we could illustrate these changes in a TV programme in the future. Also, I would like to know about any new and positive developments where chemicals which have been a problem in the

atmosphere have been remedied by new and advanced methods?

I look forward to hearing from you.
Kind regards,
James

James Morgan
BBC - Area 2.27 - Pacific Quay - Glasgow - G51 1DA
T: +44 (0) 7812 198238 - E: james.morgan3@bbc.co.uk

Subject: Recommended: "Change in hottest year fuels global warming skeptics"
From: lnolan@giss.nasa.gov
Date: Thu, 23 Aug 2007 07:48:20 -0400
To: jhansen@giss.nasa.gov

lnolan@giss.nasa.gov recommends this article from The Christian Science Monitor

in today's paper...Leslie

Click here to read this story online:
http://www.csmonitor.com/2007/0823/p02s01-wogi.html

Headline: Change in hottest year fuels global warming skeptics
Byline: Brad Knickerbocker
Date: 08/23/2007
- Was 1998 the hottest year in United States history, as most reporting on climate change has presumed? Or was that record set back in 1934 before "global warming" became a scary household phrase?

A corrective twea. to National Aeronautics and Space Administration's formulation shows that the hottest year on record in the US indeed was back during the Dust Bowl days.

But does this mean that all the concern about global warming being a relatively recent phenomenon tied to carbon-belching power plants and hulking SUVs is a bunch of Al Gore hooey?

Climate change skeptics and their cheering section among conservative bloggers and radio shoutmeisters think so ◆ even though most

scientists say, no, the tweak is not a big deal and overall trends are in the direction of toastier days around the globe.

The controversy began "when Steve McIntyre of the blog Climateaudit.org e-mailed NASA scientists pointing out an unusual jump in temperature data from 1999 to 2000," reports The Los Angeles Times.

"When researchers checked, they found that the agency had merged two data sets that had been incorrectly assumed to match. When the data were corrected, it resulted in a decrease of 0.27 degrees Fahrenheit in yearly temperatures since 2000 and a smaller decrease in earlier years. That meant that 1998, which had been 0.02 degrees warmer than 1934, was now 0.04 degrees cooler."

Put another way, the new figures show that 4 of the 10 warmest years in the US occurred during the 1930s, not more recently. This caused a stir among those critical of the push to stem human-induced climate change.

"Conservative radio talk show host Rush Limbaugh used reports of the revisions to argue that climate change is a hoax perpetrated by

scientists with liberal agendas," reported The Washington Post.

"We have proof of man-made global warming," Limbaugh said on his show◆. "The man-made global warming is inside NASA. The man-made global warming is in the scientific community with false data."

Blogger Steve McIntyre, who started the controversy, lives in Canada. His hometown newspaper, The Toronto Star, headlined its story "Red faces at NASA over climate-change blunder."

"They moved pretty fast on this," McIntyre said. "There must have been some long faces."

Still, McIntyre called his finding "a micro-change," and others agree. For one, the reranking didn't affect global records, and 1998 remains tied with 2005 as the hottest year on record, the Los Angeles Times notes, quoting climatologist Gavin Schmidt of NASA's Goddard Institute for Space Studies in New York.

"The data adjustment changes 'the inconsequential bragging rights for certain years in the U.S.,' he said. But 'global warming is a global issue, and the global numbers show that there is no question that the last five to 10 years have been the hottest period of the last century.' "

A main target of criticism over the data shift is James Hansen, director of the Goddard Institute at NASA and a frequently quoted expert on climate change. On his website, Dr. Hansen explained the reasons for the change, and he played down its importance.

"How big an error did this flaw cause?... The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect ... on the global warming issue? Certainly not◆. What we have here is a case of ... contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill."

Meanwhile, evidence of global warming continues to mount. Citing a new study by researchers at the University of East Anglia, The Guardian newspaper reports that "some tipping points for climate change could be closer than previously thought."

"In drawing together research on tipping points, where damage due to climate change occurs irreversibly and at an increasing rate, the researchers concluded that the risks were much greater than those predicted by the latest report by the Intergovernmental Panel on Climate Change (IPCC)."

Is the issue settled? Far from it, says Roy Spencer, a principal research scientist for the University of Alabama, who describes himself as "skeptical of the claim that global warming is mostly manmade."

Blogging on TCSDaily.com Dr. Spencer writes:

"In case you hadn't noticed, the global warming debate has now escalated from a minor skirmish to an all-out war◆. In the last year or so, more and more scientists have been coming out of the closet

and admitting they've had some doubts about this whole global warming thing."

Subject: FW: Question about Warmest year
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Mon, 27 Aug 2007 15:18:30 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov

Hi...would one of you like to reply to him?

Thanks.

Leslie

Original Message:

From: Alan Dyer alandyer@telusplanet.net
Date: Sat, 25 Aug 2007 09:31:21 -0600
To: Leslie.M.McCarthy@nasa.gov
Subject: Question about Warmest year

Hello Ms. McCarthy,

I'm with the science centre in Calgary, Canada and am looking for some authoritative and quotable information on what Goddard researchers have measured as the warmest years in the last century. The information I have from Goddard press releases such as at:

http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html

is that 2005, 1998, 2002, 2003 and 2006 are the warmest years of the last 100 years.

However, a columnist for a local newspaper in an August 24 editorial denying global warming and Arctic ice reduction quotes Goddard research as saying this:

NASA's Goddard Institute for Space Studies had to back down from its previous claim that 1998 was the U.S.'s hottest year on record. That distinction now goes to 1934.

Indeed, four of the hottest years on record are in the 1930s and polar bears survived just fine.

Before I counter with any rebuttal or letter to the editor I wanted to check what might be the source of that "fact" attributed to Goddard research and how the writer might have misconstrued some statement out of Goddard. I'm looking for a quote I can include in my rebuttal and even a reference to some published paper that provides an authoritative answer to the question of "what were the warmest years."

Many thanks for your time.

Alan Dyer
Producer and Astronomer
TELUS World of Science
Calgary, Canada

PS: I have taken the liberty of sending similar inquiries directly to Mark Schoeberl at GSFC and James Hansen at GISS. Thanks!

Alan Dyer
P.O. Box 1436, Stn. M
Calgary, Alberta
Canada T2P 2L6

Ph.: (403) 734-3155 (home)
(cell)
Ph.: (403) 268-8331 (work)

Subject: Time sensitive media request
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Wed, 29 Aug 2007 12:56:48 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov
CC: dcain@giss.nasa.gov

Hi:

Had a voice mail today from Neil Monroe of the National Journal (202-739-8464) who is writing what he called a "small blurb" on the temperature data changes. He would like to speak with someone today if possible.

http://nationaljournal.com/

Please advise.

Thanks.

Leslie

Subject: WSJ.com - Commentary: Not So Hot
From: lnolan@giss.nasa.gov
Date: Thu, 30 Aug 2007 07:19:18 -0700 (PDT)
To: rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov

WSJ.com

Powered by

*** Please note, the sender's email address has not been verified.**

Thought you would be interested in this...Leslie

Click the following to access the sent link:

WSJ.com - Commentary: Not So Hot* This article will be available to non-subscribers of the Online Journal for up to seven days after it is e-mailed.

SAVE THIS link FORWARD THIS link

Get your EMAIL THIS Browser Button and use it to email information from any Web site.

*This article can also be accessed if you copy and paste the entire address below into your web browser.
http://online.wsj.com/wsjgate?subURI=%2Farticle%2FSB118835472087611877-email.html&
nonsubURI=%2Farticle_email%2FSB118835472087611877-lMyQjAxMDE3ODM4MDMzNTA0Wj.html

Subject: time sensitive--National Journal
From: "lesgiss@verizon.net" <lesgiss@verizon.net>
Date: Thu, 30 Aug 2007 11:09:51 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov
CC: dcain@giss.nasa.gov

Hi:

Neil Munro from the National Journal has called a second time..

202-739-8464

His email is nmunro@njdc.com

I will send him Jim's "Lights Out" piece in the mean time....

Would one of you have time to call or email him today?

Thanks.

Leslie

Subject: FW: <no subject>
From: Donald Anderson <donald.anderson-1@nasa.gov>
Date: Mon, 13 Aug 2007 12:24:45 -0400
To: James Hansen <jhansen@giss.nasa.gov>

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <hal.maring@nasa.gov>
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" <dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the "U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
>
> *Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.*
>
> *The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.*
>
> *So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.*
>
> *Who is this man who understands American climate data so much better than the National Aeronautics and*

Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

From: "CHRISTINE BARATTA, BLOOMBERG/ NEWSROOM:" <cbaratta@bloomberg.net>
To: LNOLAN@giss.nasa.gov
X-BLP-GUID: 46C20C24000010A3003918350000
Subject: Dr. Hansen available today
Date: Tue, 14 Aug 2007 16:10:12 -0400
Sender: cbaratta@bloomberg.net

Hi Leslie, Just checking to see if Dr. Hansen is available to speak with Tom Moroney from our national radio program, "Simply Put" to discuss the revised climate data that shows 1934 as the hottest U.S. year on record, ousting 1998 as one of the hottest years. We can do this by phone this afternoon, Please let me know if he is available. Thank you

---

Christine Baratta
Executive Producer
WBBR Bloomberg Radio
cbaratta@bloomberg.net
617-210-4616 office
cell
The show is broadcast on WBBR-AM, Bloomberg's home station, reaching the entire New York City metropolitan area and extending into Philadelphia, New Jersey, Baltimore, New England, XM, Sirius and World Space satellite systems.

Subject: Re: Peak Oil paper and Global Temperature
From: "Bruce.Barkstrom" <Bruce.Barkstrom@noaa.gov>
Date: Mon, 10 Sep 2007 10:12:32 -0400
To: James Hansen <jhansen@giss.nasa.gov>

<x-flowed>
Interesting papers. Has there been any attempt to use
Bayesian forecasting techniques on the temperature
record? For other reasons I got off into looking at
Pole, West, and Harrison's "Applied Bayesian Forecasting
and Time Series Analysis" [1994, Chapman and Hall].

Bruce B.

James Hansen said the following on 9/7/2007 9:12 PM:
> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

</x-flowed>

Subject: Re: 1934: Warmest Year on Record
From: @ecs.umass.edu>
Date: Wed, 29 Aug 2007 11:07:15 -0400
To: @ajg.com, James.E.Hansen@nasa.gov
CC: chuck_grassley@grassley.senate.gov, president@whitehouse.com, Senator_McCain@mccain.senate.gov, senator_lieberman@lieberman.senate.gov, senatorlott@lott.senate.gov, chuck_hagel@hagel.senate.gov, senator_reid@reid.senate.gov

While the theories promoting "Global Warming" are plausible, so far, the scientific data do not support them.

That's why the environmental activists now call it "Climate Change." Any deviation in precipitation or temperature from the average must be caused by Republicans driving SUVs.

For those of us who live in New England, global warming occurred 12 thousand years ago. Whenever I work in my garden or on my lawn, I have to deal with the rocks left behind by the glaciers.

As a nation, our highest priorities need to be to win the War on Terror and to prepare for the coming World War.

Unfortunately, as always, the left is trying to distract us from THIS "inconvenient truth."

At 10:21 AM 8/29/07, @ajg.com wrote:

> Good Morning Mr. Hansen,
> Today's Wall Street Journal has an article on page A14 titled, Not So Hot. Stephen McIntyre found that NASA made a technical error in standardizing the weather air temperature data post 2000. Curiously and most interesting is that these temperature mistakes were only for the United States; their net effect was to lower the average temperature reading from 2000-2006 by 0.15C.
>
> It is interesting that Mr. Hansen has been unapologetic about NASA's error. I don't see the point of getting excited about global warming, if NASA's chief is going to ignore its error and continue about the global warming issue, when this article explicitly shows that 1934 was the warmest year on record. Ignoring facts is not very scientific; I hope that Mr. Hansen does not call himself a scientist, since he chooses to ignore truth along with Al Gore.

Subject: Years of bad data corrected; 1998 no longer the warmest year on record
From: @gmail.com>
Date: Fri, 10 Aug 2007 11:12:42 -0400
To: James.E.Hansen@nasa.gov

Dear Dr. Hansen,

I'm doing some research on anthropological global warming. The problem I'm having now is that NASA has now released corrected figures, and the changes are truly astounding. The warmest year on record is now 1934. 1998 (long referred to as record-breaking) moves to second place. 1921 takes third. In fact, 5 of the 10 warmest years on record now **all occur before World War II**. This change leads me to believe NASA is being manipulated by those who "deny" the globe is in a warming trend. Could you please help me understand these revelations? Thank you and have a nice day.

Sincerely,

X-VirusChecked: Checked
X-Env-Sender: martin.delgado@mailonsunday.co.uk
X-Msg-Ref: server-5.tower-180.messagelabs.com!1187274814!510920?!1
X-StarScan-Version: 5.5.12.11; banners=-,-,-
X-Originating-IP: [
Subject: Goddard Institute
To: leslie.m.mccarthy@nasa.gov
Date: Thu, 16 Aug 2007 14:33:33 +0000
From: martin.delgado@mailonsunday.co.uk
X-Mailer: Lotus Notes Release 6.5.4 March 27, 2005
X-Disclaimed: 27343
X-MIMETrack: CD-MIME by Router on tmosmail1/TMOS/ANL(Release 7.0.2FP1|January 10, 2007) at 16/08/2007 15:33:34,CD-MIME complete at 16/08/2007 15:33:34,Itemize by Router on tmosmail1/TMOS/ANL(Release 7.0.2FP1|January 10, 2007) at 16/08/2007 15:33:34
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7GEYTMQ328067

Leslie,
As discussed a moment ago, here are my contact details at the Mail on Sunday.
00-44-207-938-7109 or 00-44-207-938-7400.

A couple of points I'd like to cover:
What is the likelihood that other countries (the UK, for example) are making similar statistical 'errors' in their temperature calculations?
Does NASA accept that the McIntyre controversy helps the cause of global warming 'sceptics'.
How can an organisation as powerful and well-resourced as NASA make such a mistake?

Thank you for your help.
Martin Delgado
Reporter, Mail on Sunday

Subject: Re: Peak Oil paper and Global Temperature
From: @aol.com
Date: Fri, 14 Sep 2007 04:12:15 -0400
To: jhansen@giss.nasa.gov

Leemans and Eickhout (2004) found that ecosystem adaptive capacity decreases rapidly with an increasing rate of climate change.

If the rate should exceed 0.4 C/decade, all ecosystems will be quickly destroyed.

According to the Intergovernmental Panel on Climate Change (IPCC), the global average temperature today is increasing by 0.2 C/decade.

This increase is caused by greenhouse gases we put into the atmosphere decades ago, due to the lag time between emission and temperature rise.

We have emitted nearly double the greenhouse gas since then, and are increasing our emissions at a rate of over 3% per year.

Therefore, in the next couple of decades we are facing the quick destruction of all the world's ecosystems, which will result in abrupt climate change (I suggest reading the Pentagon's alarming report on this subject).

Reference: Leemans og Eickhout, 2004, Another reason for concern: regional and global impacts on ecosystems for different levels of climate change, Global Environmental Change 14, 219–228.

P.S. Any feasible planetary rescue strategy must include a method of removing some of the excess CO2 from the air.

I suggest the low cost, highly scalable, and technically feasible method of biosequestration.

I suggest engineering and extensively testing a GMO and seeding it into the ocean.

-----Original Message-----
From: James Hansen <jhansen@giss.nasa.gov>
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Sent: Fri, 7 Sep 2007 8:12 pm
Subject: Peak Oil paper and Global Temperature

To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

Email and AIM finally together. You've gotta check out free AOL Mail!

Subject: Re: Y2K correction
From: KrFrench@ngs.org
Date: Fri, 10 Aug 2007 14:45:58 -0400
To: rruedy@giss.nasa.gov

Hi Reto,

Thanks for the heads up on this and glad we don't have to change anything because it's printed and done. Looks very nice and I'll be sending complimentary copies your way once it is published. We'll keep your email in the file in case we receive letters about this.

Best,
Kris

Kris French
National Geographic Maps
Senior Research Cartographer
1145 17th Street NW
Washington, D.C. 20036
Tel. 202-775-6173 Fax 202-429-5704
email: krfrench@ngs.org

Reto Ruedy <rruedy@giss.nasa.gov>

08/10/2007 02:42 PM

Please respond to rruedy@giss.nasa.gov

To KrFrench@ngs.org
cc
Subject Y2K correction

Hi Kris,

Steve McIntyre, a former mining executive, now a blogger and global warming denier, is blowing a small correction in our procedure of handling US data way out of proportion. The correction has absolutely no impact on the global mean temperature time series, over the US it made a difference of .15 C.

I checked what this correction does to your map and it does change the colors somewhat over parts of the US; the rest of the world is unaffected. Even the change over the US is way within the margin of error (0.5 C). So there is little need to make any changes.

The timing is a bit awkward, though. Sorry for that,

Reto

Subject: Re: Peak Oil and Global Temperature
From: @gmail.com>
Date: Sat, 8 Sep 2007 10:12:52 +0200
To: "James Hansen" <jhansen@giss.nasa.gov>, @mtm.kuleuven.be>,
@gmail.com>

Dear Mr. Hansen,

http://publications.uu.se/abstract.xsql?dbid=7625
http://www.peakoil.net/GiantOilFields.html : a link to a new study at the Swedisch Uppsala University regarding oil reserves and peak oil based on the giant oil fields.

Regards,

2007/9/8, James Hansen <jhansen@giss.nasa.gov>:

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

Subject: RE: A Light On Upstairs?
From: @nrdc.org>
Date: Fri, 10 Aug 2007 18:36:34 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Thanks for sending this around Jim. I had read the blog post on the New York Times and was struck by the hype. I fear they will still try to sow confusion by asserting that "5 of the 10 warmest years on record now all occur before World War II," as repeated (with emphasis) on the NYTimes blog site:
http://opinionator.blogs.nytimes.com/
Very puzzling that the Times blog would handle this in this fashion.

From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Friday, August 10, 2007 6:12 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: A Light On Upstairs?

> To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject but this line should be included in the e-mail.

Subject: RE: A Light On Upstairs?
From: @nrdc.org>
Date: Fri, 10 Aug 2007 18:36:34 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

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http://opinionator.blogs.nytimes.com/
Very puzzling that the Times blog would handle this in this fashion.

From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Friday, August 10, 2007 6:12 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: A Light On Upstairs?

To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject but this line should be included in the e-mail.

Subject: Re: Peak Oil and Global Temperature
From: @gmail.com>
Date: Sat, 8 Sep 2007 12:01:09 -0400
To: James Hansen <jhansen@giss.nasa.gov>

<x-flowed>
Hi Jim,
I can't open your site.

On Sep 7, 2007, at 9:20 PM, James Hansen wrote:

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

==========

NEW EMAILS: @gmail.com @gmail.com

Cell: @gmail.com

==========

The current wind energy generating capacity in the U.S. could prevent the burning of 8.4 million tons of coal at the current utility fuel mix. For each megawatt of wind energy produced, 2,000 tons of carbon dioxide greenhouse gases are avoided, 10 tons of sulfur dioxide and 6 tons of nitrogen oxide.
Power generated from coal and other fossil fuels, and the extraction of these fossil fuels have had, and will continue to have, impacts on birds. For example, more than 3,000 birds were killed by collisions during one night in fall migration at a four-smokestack Florida coal-fired power plant. Hundreds of thousands of birds were killed in the Exxon Valdez oil spill and thousands of acres of habitat were damaged.

ABC's Global Climate Change Program documents the significant changes in store for many migratory bird species in this century due to fossil fuel burning. Without a significant change in electrical power conservation and/or a major shift to alternative fuels, the U.S. is projected to increase its greenhouse carbon dioxide emissions between 2001 and 2025 by 43.5 percent. Global warming is predicted to cause changes in the ranges of birds, disruption of migration timing and synchrony with food resources. Avian species and some ecosystems may be threatened. For a state by state analyses of the effects on birds, go to ABC's web site at: http://www.abcbirds.org/climatechange/statepage.htm and access The Birdwatcher's Guide to Global Warming.
FROM: AMERICAN BIRD CONSERVANCY WIND ENERGY POLICY http://www.abcbirds.org/policy/windpolicy.htm

</x-flowed>

Subject: RE: Peak Oil and Global Temperature
From: "Tam Hunt" <thunt@cecmail.org>
Date: Mon, 10 Sep 2007 09:37:51 -0700
To: "James Hansen" <jhansen@giss.nasa.gov>

Jim, I fear you've overlooking significant available data on the issue of recoverable fossil fuels. The Energy Watch Group, a German NGO, has recently completed a study of global coal reserves and found that it's likely that reserves are far smaller than thought. See attached. Also, the EIA's projections of global oil supplies are simply not credible. Conventional oil production peaked in May, 2005, and it's likely we're at or very near a global peak of all liquids production today. See attached. So your estimates for fossil fuel use are likely far off the mark. This is good news of course, but doesn't moot the point that we are already on a path with current warming and current CO2 levels to warrant very aggressive action to mitigate climate change. At the least your paper should include discussion of these data. Tam Hunt Energy Program Director / Attorney Community Environmental Council Santa Barbara, CA (805) 963-0583, ext. 122 thunt@cecmail.org -----Original Message----- From: James Hansen [mailto:jhansen@giss.nasa.gov] Sent: Friday, September 07, 2007 6:20 PM To: jhansen@giss.nasa.gov Cc: jhansen@giss.nasa.gov Subject: Peak Oil and Global Temperature To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject http://www.columbia.edu/~jeh1 /distro_peakrevandgistemp_070907.pdf Attachment Converted: "c:\program files\qualcomm\eudora \attach\EWG - Coal - Resources and Future Production (March 2007).pdf" Attachment Converted: "c:\program files\qualcomm\eudora\attach\EIA - World crude oil production 1997-2007 (showing May 2005 peak).xls"

Subject: Re: Peak Oil and Global Temperature
From: @yahoo.com>
Date: Fri, 7 Sep 2007 20:01:56 -0700 (PDT)
To: James Hansen <jhansen@giss.nasa.gov>

Hi Jim,

The more we learn it seems the more there are indications that we were doing harm to the balance way back. I interviewed Rajenda Pakuri yesterday chairman OF THE IPCC. He thinks we have about 2 1/2 degrees for certain in the pipeline so the questrion becomes what happened to your 1 degree to one in 1 1/2 warning in 2006? I willing to bet that we get 3 minimum to 5 maximum withing the next 30 years 455 to 535 ppm is a CERTAINTY.

Given the conservative nature of the IPCCC I I was quite taken with his thoughts. Can we save it? We can give it a could but there are nany condtradictions which he sees and is worrieed about those.

It will all depend on how soon the US takes action and what leverage we can put on China and the special interests meaning oil interests. With so much money in the ground the discussion of peak oil takes on new meaning. If we burn it all were done unless sequestered as you know. But what will the cost do to the economy?

This is the discussion that has to be highlighted! Have a good weekend and stay HEALTHY. An old farmer friend once said to me " you just can't help some people!"

Best,

--- James Hansen <jhansen@giss.nasa.gov> wrote:

> To be removed from Jim Hansen's e-mail distribution
> respond with REMOVE as
> subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

Subject: Re:use of Bern Model in Peak Oil and Global Temperature
From: @climate.unibe.ch>
Date: Mon, 10 Sep 2007 09:57:00 +0200
To: James Hansen <jhansen@giss.nasa.gov>

<x-flowed>
Dear James Hansen,

Apparently, you have been critized for using an atmospheric pulse response function of the Bern model in your recent manuscript on peak oil (Karecha and Hansen).

I would like to point out that using oceanic mixed layer and biospheric decay response functions as described in Joos et al., Tellus, 1996 would be a more appropriate choice. This would allow you to include the well understood non-linearities of aquatic carbonate chemistry, while still using a simple, transparent and cost-efficient approach. Please note that this old version of the Bern model used in the IPCC Second Assessment Record and for the determination of GWP in the Kyoto Protocol yields very similar results as the newer versions used in the TAR (Joos et al., GBC, 2001) and the AR4 (Plattner et al., J. Climate, 2007 submitted) and results are in the range of currently used carbon cycle models.

You can download a simple and tested fortran code from my home page
http://www.climate.unibe.ch/~joos/prmodel

The publications can also be downloaded as pdfs from my home page:
http://www.climate.unibe.ch/~joos/publications

With best regards,

James Hansen wrote:
> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

--

</x-flowed>

Subject: Re: Wired News climate change query
From: Brandon Keim <brandon@earthlab.net>
Date: Fri, 10 Aug 2007 09:21:52 -0600
To: James Hansen <jhansen@giss.nasa.gov>

Jim,

Thank you. I put the response up

http://blog.wired.com/wiredscience/2007/08/climate-expert-.html

and it was our most-read post of the day. The comments were predictable, but there was one that I wasn't sure about:

"Much of the perceived warming is artificial. NASA's dataset had an error in it. The error related only to U.S. temperature record, but it is still significant. NASA GISS corrected its temp record and now the current decade is cooler than the 1990s and the 1990s are cooler than the 1930s. This is a big story but has not been picked up by the media yet. Read this http://data.giss.nasa.gov/gistemp/"

If you've an extra couple minutes again for the blog -- is that argument you've come across before, and is it meaningful in any ways?

Thanks,

Brandon

. Brandon Keim
. Wired News
. brandon@earthlab.net
. 617.233.5346

On Aug 9, 2007, at 8:48 AM, James Hansen wrote:

> No, you cannot blame individual events like that on climate change, as it was possible for them to occur even without the human-made changes to the atmosphere. However, it is fair to ask whether the human changes have altered the likelihood of such events. There the answer seems to be yes. Storms driven largely by latent heat, and that includes thunderstorms, are expected to become stronger as the air becomes warmer and contains more moisture. Global warming does cause just such a tendency. Jim
>
> On 8/9/07, **Brandon Keim** <brandon@earthlab.net> wrote:
> > Dear Dr. Hansen,

I'm writing about yesterday's tornado for Wired's science blog, and have a quick question: did climate change cause it?

I know that's a very simplistic way of phrasing the question, but I figure that's how most people will be asking it.

If you have a couple minutes to jot down your thoughts, I'd love to see them and put them up on the blog.

Sincerely,

Brandon Keim

. Brandon Keim
. Wired News
. brandon@earthlab.net
. 617.233.5346

Subject: Temperature data
From: @comcast.net>
Date: Mon, 20 Aug 2007 09:18:57 -0400
To: <James.E.Hansen@nasa.gov>, <makikosato@giss.nasa.gov>

Sorry to burden you with a quick question, which I hope one of you can answer. Our daily newspaper recently printed a column by Cal Thomas attempting to discredit concern about global warming by alleging that NASA was wrong in arguing that 9 out of 10 of the warmest years on record have occurred since 1995. Instead he says that thanks to McIntyre it is now clear that 4 of the 10 warmest years were in the 1930s, that 2000, 2002, 2003, 2004 actually fall behind 1900, and that the warmest year on record is 1934. I note that the GISS website does credit McIntyre with some kind of correction, but as I look at your latest graphs (perhaps I am not looking at the right ones) it does not appear to me that 1900 or the 1930s had record warm years.
Since I hope to write an op-ed piece for the local paper (Naples Florida Daily News) I would like to know how much if any truth lies in what Thomas says. Thank you for any information you can provide, and again sorry to bother you.

Subject: Re: Peak Oil and Global Temperature
From: "Pushker Kharecha" <pushker@giss.nasa.gov>
Date: Wed, 12 Sep 2007 16:57:14 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Jim -

I think he's simply missing one of the main points of our paper, i.e. that one doesn't even need to factor in the unconventional fuels to realize that the conventional oil and gas reserves alone have enough carbon to get us to/above the dangerous CC threshold (assuming the fixed and conservative 2%/yr usage growth rate till "peak"). In defense of our approach though, we do incorporate some element of dynamism in our reserve estimates, by merely including the oil and gas reserve growth terms.

As for the fuel substitution issue raised by Smith and the attached paper, unless there continue to be extremely misguided fossil energy subsidy policies, it's hard to imagine that it will one day become practical to achieve that type of widespread substitution of unconventional for conventional fuels, simply because, forgetting the economic issues (which can be largely dealt with via a carbon price), the unconventional fuels are relatively inefficient *thermodynamically*. This is acknowledged in the attached paper, which while objecting to use of the term "peak", actually does a reasonably good job of outlining the potential problems of higher reliance on unconventional fuels.

Bottom line for me is that our approach is still sound since we already know what's likely to happen if we factor in the unconventional fuels....

Pushker

On 9/12/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:

> --------- Forwarded message ---------
> From: _____@berkeley.edu>
> Date: Sep 12, 2007 1:01 PM
> Subject: Re: Peak Oil and Global Temperature
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: @harvard.edu>
>
> Jim, As someone returning to the energy field after some years absence, I may be out of date myself, but I think some of the statements in this article skirt the edge of reality. Basically, the concept of "peak" oil is not a valid one from a climate or energy demand perspective, because it only refers to so-called "conventional oil" Even the term "conventional" is not fixed in time and space and thus not terribly useful in many circumstances -- look at deep off-shore production, now conventional but only becoming so a couple of decades back.
>
> Even if we accept the term "conventional" to mean something fixed and

we accept that half of it has been pumped, which is quite doubtful, there is plenty more oil out there in enhanced recovery (EOR) and oil sands, even before going to synfuels. See Fig 1 in the attached paper which nicely shows this. Even if we somehow were to stop at oil sands, we would have probably have at least 4 times more oil available in the future from these sources (rest of conventional, EOR, tar sands). Given proven response to price in the past, one could argue for quite a bit more. With the estimates from synfuels, of course, the estimate become vast, with perhaps 20 times more to be sold than sold in the past. Add in oil shale, and it is larger still

The economic, environmental, water and other costs of doing these things (particularly oil shale), of course, are immense, but at $100 bb/oil, they will likely be tapped barring restraints of other sorts. Also, or course, the GHG per unit oil delivered to the customer goes steadily up, not a good pattern.

A better term here is not "peak," which is misleading in the extreme, but "transition", i.e., to different geologic sources, efficiencies of conversion, environmental impacts, national distribution of resource holdings, etc.. This transition is already well underway with the high prices now prevalent. For example, production from Alberta oil sands (which has oil-equivalent resources exceeding those in Saudi Arabia I believe) now exceeds 1 million bbl/d and is still growing. "Conventional" is changing yet again.

Hope this is useful./k

p.s. I copy who may have some corrections or elaborations.

At 06:27 PM 9/7/2007, you wrote:

>To be removed from Jim Hansen's e-mail distribution respond with
>REMOVE as subject
>
>http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf
>

Subject: Re: Peak Oil and Global Temperature
From: "Pushker Kharecha" <pushker@giss.nasa.gov>
Date: Wed, 12 Sep 2007 17:43:40 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

True....Although I suspect in this case it might be more of an issue of his not actually reading the damn paper closely enough, and not understanding our goals clearly enough. Also, the whole topic of energy futures is obviously a "delicate" one, and I suppose people can't be faulted for having their own (often long-held) biases which place them distinctly into one of two highly combative camps (optimists vs. pessimists).

Pushker

On 9/12/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:

> Yes, it is surprising how such smart characters cannot reason better -- perhaps it is useful mainly as a guide to how we need to explain things a little more thoroughly. Jim
>
> On 9/12/07, **Pushker Kharecha** <pushker@giss.nasa.gov > wrote:
>
> > Jim -
> >
> > I think he's simply missing one of the main points of our paper, i.e. that one doesn't even need to factor in the unconventional fuels to realize that the conventional oil and gas reserves alone have enough carbon to get us to/above the dangerous CC threshold (assuming the fixed and conservative 2%/yr usage growth rate till "peak"). In defense of our approach though, we do incorporate some element of dynamism in our reserve estimates, by merely including the oil and gas reserve growth terms.
> >
> > As for the fuel substitution issue raised by Smith and the attached paper, unless there continue to be extremely misguided fossil energy subsidy policies, it's hard to imagine that it will one day become practical to achieve that type of widespread substitution of unconventional for conventional fuels, simply because, forgetting the economic issues (which can be largely dealt with via a carbon price), the unconventional fuels are relatively inefficient *thermodynamically*. This is acknowledged in the attached paper, which while objecting to use of the term "peak", actually does a reasonably good job of outlining the potential problems of higher reliance on unconventional fuels.
> >
> > Bottom line for me is that our approach is still sound since we already know what's likely to happen if we factor in the unconventional fuels....
> >
> > Pushker
> >
> > On 9/12/07, **James Hansen** <jhansen@giss.nasa.gov > wrote:

---------- Forwarded message ----------
From: @berkeley.edu>
Date: Sep 12, 2007 1:01 PM
Subject: Re: Peak Oil and Global Temperature
To: James Hansen <jhansen@giss.nasa.gov>
Cc: @harvard.edu>

Jim, As someone returning to the energy field after some years absence, I may be out of date myself, but I think some of the statements in this article skirt the edge of reality. Basically, the concept of "peak" oil is not a valid one from a climate or energy demand perspective, because it only refers to so-called "conventional oil" Even the term "conventional" is not fixed in time and space and thus not terribly useful in many circumstances -- look at deep off-shore production, now conventional but only becoming so a couple of decades back.

Even if we accept the term "conventional" to mean something fixed and we accept that half of it has been pumped, which is quite doubtful, there is plenty more oil out there in enhanced recovery (EOR) and oil sands, even before going to synfuels. See Fig 1 in the attached paper which nicely shows this. Even if we somehow were to stop at oil sands, we would have probably have at least 4 times more oil available in the future from these sources (rest of conventional, EOR, tar sands). Given proven response to price in the past, one could argue for quite a bit more. With the estimates from synfuels, of course, the estimate become vast, with perhaps 20 times more to be sold than sold in the past. Add in oil shale, and it is larger still

The economic, environmental, water and other costs of doing these things (particularly oil shale), of course, are immense, but at $100 bb/oil, they will likely be tapped barring restraints of other sorts. Also, or course, the GHG per unit oil delivered to the customer goes steadily up, not a good pattern.

A better term here is not "peak," which is misleading in the extreme, but "transition", i.e., to different geologic sources, efficiencies of conversion, environmental impacts, national distribution of resource holdings, etc.. This transition is already well underway with the high prices now prevalent. For example, production from Alberta oil sands (which has oil-equivalent resources exceeding those in Saudi Arabia I believe) now exceeds 1 million bbl/d and is still growing. "Conventional" is changing yet again.

Hope this is useful./k

p.s. I copy who may have some corrections or elaborations.

At 06:27 PM 9/7/2007, you wrote:

>To be removed from Jim Hansen's e-mail distribution respond with
>REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf
>

Subject: climate change - interview request
From: "Richard Luscombe" <richard.luscombe@westatlanticmedia.com>
Date: Mon, 13 Aug 2007 09:29:49 -0400
To: <James.E.Hansen@nasa.gov>
CC: <dcain@giss.nasa.gov>

Dear Dr Hansen

I was hoping you might be able to spare me a couple of minutes on the phone this morning (Monday) to help me with a story I am writing about NASA changing the rank of warmest years in the US. My name is Richard Luscombe and I'm a journalist working for The Scotsman, a national newspaper in the UK.

I would only require a couple of minutes of your time, just to try to get a better perspective of how the ranking change came about and its significance or otherwise to global warming trends. I have spoken to Stepehn McIntyre who sent GISS an email that apparently led to the change, and I would very much like to get your take on it before we go to press.

I apologise for the short-notice request but hope you could squeeze in a quick call to me at some point before my deadline of noon.

My telephone number (I'm based in Florida) is 954-755-5116.

Many thanks and best wishes

Richard

Richard Luscombe
West Atlantic Media
Home/office +1 954-755-5116
Mobile Fax +1 954-755-2997
richard.luscombe@westatlanticmedia.com

From: "Maugh, Thomas" <Thomas.Maugh@latimes.com>
X-HAT: SenderGroup= RELAYLIST, PolicyApplied=$RELAYED .
X-SBRS: None
X-IronPort-AV: E=Sophos;i="4.19,261,1183352400"; d="scan'208";a="44608170"
Subject: Any chance I can reach Gavin Schmidt today?
Date: Tue, 14 Aug 2007 14:57:18 -0700
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Thread-Topic: Any chance I can reach Gavin Schmidt today?
Thread-Index: AcfevhUZITRiyMVnQ0C+amZYjs+S+w==
To: <Leslie.M.McCarthy@nasa.gov>
X-OriginalArrivalTime: 14 Aug 2007 21:57:19.0460 (UTC) FILETIME=[15D23A40:01C7DEBE]
X-MIME-Autoconverted: from quoted-printable to 8bit by server2.giss.nasa.gov id l7EM1fEs39990708

It is about the changes in the rankings of the hottest years.

Thomas H. Maugh II
Science/Medical Writer
Los Angeles Times
202 West First Street
Los Angeles, CA 90012
213 237-7953
FAX: 213 237-4712
Toll-free: 1-800-283-6397 x77953

Subject: Re: Peak Oil and Global Temperature
From: "John Miglietta" <john.miglietta@
Date: Mon, 10 Sep 2007 17:17:18 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "John Miglietta" <john.miglietta@

<x-flowed>
Hi Dr. Hansen, Was not able to find the document you sent on Implications of Peak Oil..." Also wondering if we'll be able to do that interview in the next month or so. My note to you was:

> Any chance we could do something on a weekend day in the next 4 to 8 weeks? A lot of the young people in the video are now in college, so that would get more of them to the interview. If that's no good, give me a few weekday possibilities in September / October, and I'll work with that.<<

Hope to hear back soon. Would be happy to send you a review copy of the video as it is now, and best of luck with everything...
John Miglietta
JDM Productions, Inc.
www.JDMPromedia.com

----- Original Message ----- From: "James Hansen" <jhansen@giss.nasa.gov>
To: "John Miglietta" <john.miglietta@
Cc: <jhansen@giss.nasa.gov>
Sent: Friday, September 07, 2007 9:16 PM
Subject: Peak Oil and Global Temperature

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

</x-flowed>

Subject: Resolving Skeptics vs. Hansen
From: FMims@aol.com
Date: Mon, 3 Sep 2007 13:08:36 EDT
To: jhansen@giss.nasa.gov
CC: @ieee.org

Dear Jim,

I've just submitted a letter to a leading journal that cites your soot vs. ice findings (after private review by a leading expert). The theme is that CO2 will be around for a century or more while the effect of anthropogenic soot can be reduced or even ended much more quickly. The purpose of the letter is that this is at least one area in which there is room for optimism.

Now I'm writing a newspaper column about the increasing web bandwidth devoted to questions about the USHCN, GHCN, and GISS wxr station sites, many of which clearly do not meet WMO standards. School GLOBE stations I've seen are better situated than some of the USHCN sites.

A few years ago when we both spoke at the Earth Explorers Institute at the Maryland Science Center, I was surprised to see a major, obvious problem with the NWS station adjacent to the museum. The station is surrounded by a high, black metal fence, and a large, black metal plate was lying on the ground directly under the sensor array, which I photographed. I contacted the NWS, and they agreed to remove the plate. They had no idea how long it had been in place.

A major criticism of GISS involves how the data from problem sites is corrected. There is widespread criticism that the GISS methodology is not published or understandable, and I want to put this criticism to rest in my column by giving your procedure for correcting a worse case site:

http://gallery.surfacestations.org/main.php?g2_itemId=1606

TUCSON 32.23°N, 110.95°W; 742 m
GISS Station ID: 425722740000 .

This site is over a small gravel pad in an asphalt street surrounded by large buildings. The explanation offered by a spokesman from U of AZ is that the site simulates desert conditions. However, back in 2004 I studied and published the ground temperature of gravel, asphalt and vegetation in a desert region of West Texas and found that asphalt and gravel are much hotter than the adjacent desert.

Thanks for your help with this.

Best regards,

Forrest

Forrest M. Mims III
www.forrestmims.org
www.sunandsky.org

Geronimo Creek Observatory
Phone: 830-372-0548

Editor, *The Citizen Scientist* www.sas.org/tcs

Chairman, Environmental Science Section
Texas Academy of Science

Member representing Guadalupe County

Subject: Re: Peak Oil and Global Temperature
From: @bellsouth.net>
Date: Fri, 7 Sep 2007 22:53:06 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

<x-flowed>
You need to start talking about the danger of methane hydrates. At least 75% of the hydrates that exist today were actually manufactured by the oil and gas industrie's practice of Enhanced Oil Recovery- EOR, whereby they use fresh water and liquid CO2 in the deep earth full of carbon to make it easier to get the oil and gas out of the ground. Methane hydrates are fragile; can not be harvested; have destroyed life on earth before when their quantities were much less and hold the power to create oblivion with today's quantities. They are not salt tolerant and have been exploding since 1947 shortly after off shore drilling began. They cause the dinoflaggia that were first discovered in 1947 and the excrement of the Dinoflaggia is lethal to flesh. (flesh eating). Scientists say that when we warm up between 3-5% more, it will produce a thermocline in our oceans that will cause mass disassociations of the hydrates. In the meantime, they cause extreme weather such as El Nino and La Nino during their diassociation periods, and they cause all rogue waves.

You are in a position that gives you the ear of the press; why do not you say something about this threat; surely you know about it.

----- Original Message ----- From: "James Hansen" <jhansen@giss.nasa.gov>
To: <jhansen@giss.nasa.gov>
Cc: <jhansen@giss.nasa.gov>
Sent: Friday, September 07, 2007 9:27 PM
Subject: Peak Oil and Global Temperature

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

</x-flowed>

Subject: Fwd: The Real Deal: Usufruct & the Gorilla
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 30 Aug 2007 12:02:43 -0400
To: @aol.com" @aol.com>

indeed, and the topic deserves honest unbiased and insightful reporting. See the discussion in the document below. However, in our country newspapers have always been free to be biased, and I guess that works well in the long run. Jim Hansen

---------- Forwarded message ----------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Aug 16, 2007 4:52 PM
Subject: The Real Deal: Usufruct & the Gorilla
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov

> To be removed from Jim Hansen's Email distribution respond to sender with REMOVE as subject
>
> Discussion of the significance of global temperature change matters is available at
> http://www.columbia.edu/~jeh1/realdeal.16aug20074.pdf
>
> Criticisms welcome.
>
> Jim

Subject: CCNet: ANOTHER PALEO-CLIMATE MYTH GOES UP IN SMOKE
From: "Peiser, Benny" <B.J.Peiser@ljmu.ac.uk>
Date: Mon, 17 Sep 2007 15:03:27 +0100
To: "cambridge-conference" <cambridge-conference@livjm.ac.uk>

CCNet 153/2007 - 17 September 2007 -- Audiatur et altera pars

ANOTHER PALEO-CLIMATE MYTH GOES UP IN SMOKE

New research fingers climate change, not humans, as the culprit for the extinction of Neanderthals on the Iberian Peninsula. The research contradicts prevailing theory which holds modern humans responsible for their demise. Writing in Quaternary Science Reviews, an international team of researchers used climate reconstructions based on marine records to determine that Neanderthal populations fluctuated due to climate change well before the first Homo sapiens arrived in the Iberian Peninsula.
--Mongabay.com, 30 April 2007

Here's some encouraging news for those of you out there who think we in the liberal media blame climate change on everything. A new study reports that catastrophic climate change did not - repeat not - kill the Neanderthals. The study, unfortunately, doesn't mention what did kill them off. Trans fats, perhaps?
--USA Today, 12 September 2007

Whatever it was that sealed the fate of the Neanderthals, it looks unlikely to have been climate change. That is the verdict of a new study that used climate records from Venezuela to deduce what happened at the Neanderthals' last stand at the southern tip of Europe. The research suggests that a switch to a cold, dry climate was probably not the telling factor in the demise of the Neanderthals, because of all the probable dates for their extinction, most do not lie near major cold events in the climate record.
--Michael Hopkin, Nature, 12 September 2007

The take-home message is that we can eliminate catastrophic climate change as a factor for Neanderthal extinction.
--Chronis Tzedakis, Nature, 12 September 2007

A claimed "first world conference on research integrity" opens in Lisbon, Portugal, today. The conference media release explains: "The controversies surrounding the recent assessment report of the United Nations' Intergovernmental Panel on Climate Change (IPCC) demonstrates how research integrity is a critical issue not only for the science community, but for politicians and the society as a whole as well. In August 2007 the US National Aeronautics and Space Administration (NASA) had to withdraw previous published historical climate data.
--Jennifer Marohasy, 16 September 2007

The development projects India is undertaking to reduce impacts of climate change is already cutting into its GDP. In 2006-07, India used 2.17% of its GDP on projects that will help communities adapt to climate change and reduce their vulnerability to climate change. This was disclosed on Thursday by Jayant M

Mau-skar, joint secretary in the environment ministry. Mauskar said, "In 2000-01, India was spending 0.63% of its GDP on climate change adaptation and mitigation which has now risen to 2.17%. So we can say that Nicholas Stern's argument (that climate change action does not hurt economy much) is perhaps not true."
--The Times of India, 17 September 2007

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(1) NEANDERTHALS 'NOT KILLED BY CLIMATE CHANGE'

Nature, 12 September 2007
http://www.nature.com/news/2007/070910/full/070910-7.html

Study suggests demise did not coincide with climate cooling.

Michael Hopkin

Whatever it was that sealed the fate of the Neanderthals, it looks unlikely to have been climate change. That is the verdict of a new study that used climate records from Venezuela to deduce what happened at the Neanderthals' last stand at the southern tip of Europe.

The research suggests that a switch to a cold, dry climate was probably not the telling factor in the demise of the Neanderthals, because of all the probable dates for their extinction, most do not lie near major cold events in the climate record.

Neanderthals (Homo neanderthalensis) lived in Europe until around 30,000 years ago

- not long after Homo sapiens arrived on the scene 40,000 years ago. The Neanderthals are thought to have lasted longest in the region around Gibraltar, off the southern tip of Spain.

"There are different factors that have been invoked to explain the Neanderthal extinction," says Chronis Tzedakis of the University of Leeds, UK, who led the new research. "Clearly the appearance of anatomically modern humans is the prime suspect, but given that the extinction happened during the last glacial period, when climate was changing, what we know is that the climate was extremely unstable at that time."

The main problem with testing the different theories comes from the difficulty in dating accurately the age of Neanderthal fossils and tools to compare their ages with records of past climate.

This is because 'radiocarbon dating' used on Neanderthal remains - in which researchers measure the amount of the radioactively decaying isotope carbon-14 in a sample to determine its age - is not directly related to calendar years. For very old samples, it can be used to tell whether one object is older than another, but not to determine their exact ages.

Like with like

Tzedakis and his colleagues got around this problem by comparing the radiocarbon dates of Neanderthal tools from Gorham's Cave in Gibraltar, with a very accurate set of radiocarbon dates of ocean sediments, in which the lives of tiny sea-creatures record the climate of the time. These well-dated sediments happen to come from Cariaco Basin, Venezuela.

The researchers report in Nature1, that of the three main radiocarbon dates given as possible extinction times for the Neanderthals - 32,000 years, 28,000 years and 24,000 years - only the most recent seems to have occurred at the same time as a climate shift. This most recent date is also the most controversial, meaning that it is generally more likely that it was competition with modern humans, rather than the bitter cold, that did for the Neanderthals.

"The take-home message is that we can eliminate catastrophic climate change as a factor for Neanderthal extinction," Tzedakis says.

The same method can be applied to assess the climatic conditions during any 'snapshot' event that is represented by accurately carbon-dated samples, Tzedakis adds. The climate in Venezuela is reflective of the climate in Europe, he adds, because many of Europe's climate shifts involved changes in the Gulf Stream, which influences climate from tropical America to the northern reaches of the Atlantic Ocean. And large climate swings, from warm and wet to cold and dry, tended to occur more or less all at once globally. "Changes from one condition to the other were extremely abrupt - of the order of a few decades," Tzedakis explains.

References

1. Tzedakis, P.C., Hughen, K.A., Cacho, I.& Harvati, K., . Nature 449 , 206 - 208 (2007). | Article |

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(2) CLIMATE DIDN'T KILL THE CAVEMEN

USA Today, 12 September 2007
http://blogs.usatoday.com/weather/2007/09/climate-didnt-k.html

Here's some encouraging news for those of you out there who think we in the liberal media blame climate change on everything. A new study reports that catastrophic climate change did not - repeat not - kill the Neanderthals.

These extinct archaic humans lived in parts of Europe and Asia for more than 100,000 years, before disappearing entirely some 33,000 to 24,000 years ago.

The causes of their extinction have puzzled scientists for years - with some believing it was due to competition with modern humans, while others blamed deteriorating climatic conditions.

But a new University of Leeds study -- using lots of sophisticated paleontological methodology that I don't begin to understand -- has shown that the Neanderthal extinction did not coincide with any of the extreme climate events that occurred during the last glacial period.

The study, unfortunately, doesn't mention what did kill them off. Trans fats, perhaps?

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(3) POPULAR PALEO-CLIMATE MYTH: GLOBAL WARMING KILLED NEANDERTHALS

Mongabay.com, 30 April 2007
http://news.mongabay.com/2007/0430-neanderthals.html

New research fingers climate change, not humans, as the culprit for the extinction of Neanderthals on the Iberian Peninsula. The research contradicts prevailing theory which holds modern humans responsible for their demise.

Writing in Quaternary Science Reviews, an international team of researchers used climate reconstructions based on marine records to determine that Neanderthal populations fluctuated due to climate change well before the first Homo sapiens arrived in the Iberian Peninsula. The faced adverse weather conditions--including cold, arid and highly variable climate--at the time of their disappearance some 24,000 years ago, according to the researchers

Dr. Clive Finlayson of the Gibraltar Museum lead the research.

The Neanderthal (Homo neanderthalensis) was a species of the Homo genus that inhabited Europe and parts of western Asia as early as 350,000 years ago before disappearing some 33,000 to 24,000 years ago. Neanderthals had large braincases, short but robust and muscular builds, and large noses.

Research published in Proceedings of the National Academy of Sciences (PNAS) suggests that Neanderthals 43,000 years ago eked out a meager existence, possibly supplemented by cannibalism.

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(4) MARS, LIKE EARTH, HAS CYCLICAL COLD AND WARM AGES, STUDY SAYS

National Geographic News, 14 September 2007
http://news.nationalgeographic.com/news/2007/09/070913-mars-iceage.html

Brian Handwerk

Mars has gone through 40 ice ages during the past five million years that regularly send the planet's permanent ice sheets cascading toward the equator, then melting backward, a new theory suggests.

The climate changes are likely driven by cyclical fluctuations in the planet's orbit that alter the amount of sunlight that falls on the planet's surface, says astronomer Norbert Schörghofer of the University of Hawaii at Manoa.

Understanding the sun's exact role in the Martian ice ages could help solve longstanding puzzles about the red planet.

It could also help scientists better understand Earth's complex climatic systems, which are also affected by orbital variations.

The new theory appears in this week's issue of the journal Nature.

Mystery of the Ice

In recent years extensive amounts of ice have been discovered below the surface of Mars. Much of the ice mysteriously survives far from the planet's poles.

Schörghofer suggests that this ice is newer than previously believed.

"Earlier theories have tried to explain this ice with snowfall that would have happened some five million years ago [but struggle] to explain how that ice could have stayed there," Schörghofer said.

"I'm saying it didn't stay. It went away and then came back many, many times."

According to Schörghofer, much of Mars's ice is formed by vapor diffusion-the seeping of gas directly into underground pockets during cold periods.

"The water cycle on Mars is very different than what we see on Earth," said Joshua Bandfield, a research specialist at Arizona State University's School of Earth and Space Exploration who was not involved in the study.

FULL STORY at http://news.nationalgeographic.com/news/2007/09/070913-mars-iceage.html

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(5) MEDIA BS: MAMMOTH DUNG MAY SPEED GLOBAL WARMING

Reuters, 16 September 2007
http://today.reuters.com/news/articlenews.aspx?type=inDepthNews&storyid=2007-09-17T004817Z_01_L10768861_RTRUKOC_0_US-ARCTIC-RUSSIA-PERMAFROST-ENVIRONMENT-FEAT.xml&src=rss

By Dmitry Solovyov

DUVANNY YAR, Russia (Reuters) - Sergei Zimov bends down, picks up a handful of treacly mud and holds it up to his nose. It smells like a cow pat, but he knows better.

"It smells like mammoth dung," he says.

This is more than just another symptom of global warming.

For millennia, layers of animal waste and other organic matter left behind by the creatures that used to roam the Arctic tundra have been sealed inside the frozen permafrost. Now climate change is thawing the permafrost and lifting this prehistoric ooze from suspended animation.

But Zimov, a scientist who for almost 30 years has studied climate change in Russia's Arctic, believes that as this organic matter becomes exposed to the air it will accelerate global warming faster than even some of the most pessimistic forecasts.

"This will lead to a type of global warming which will be impossible to stop," he said.

When the organic matter left behind by mammoths and other wildlife is exposed to the air by the thawing permafrost, his theory runs, microbes that have been dormant for thousands of years spring back into action.

As a by-product they emit carbon dioxide and -- even more damaging in terms of its impact on the climate -- methane gas.

According to Zimov, the microbes are going to start emitting these gases in enormous quantities.

FULL BS at http://today.reuters.com/news/articlenews.aspx?type=inDepthNews&storyid=2007-09-17T004817Z_01_L10768861_RTRUKOC_0_US-ARCTIC-RUSSIA-PERMAFROST-ENVIRONMENT-FEAT.xml&src=rss

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(6) INDIAN GOVERNMENT OFFICIAL REJECTS STERN REVIEW

The Times of India, 17 September 2007
http://timesofindia.indiatimes.com/India/Cost_of_dealing_with_climate_change_2_of_GDP_/articleshow/2373069.cms

NEW DELHI: The development projects India is undertaking to reduce impacts of climate change is already cutting into its GDP. In 2006-07, India used 2.17% of its GDP on projects that will help communities adapt to climate change and reduce their vulnerability to climate change.

This was disclosed on Thursday by Jayant M Mau-skar, joint secretary in the environment ministry, at a conference on climate change organised at the Vatavaran Film Festival here. Mauskar said, "In 2000-01, India was spending 0.63% of its GDP on climate change adaptation and mitigation which has now risen to 2.17%. So we can say that Nicholas Stern's argument (that climate change action does not hurt economy much) is perhaps not true."

Stern, in his report on climate change for the UK, he had stated that taking action to reduce climate change would not hurt the growing economies of countries like India. The official, in a way, has showcased the argument that India could be taking to the negotiating table at the UN meeting on climate change when developed countries ask it to undertake cap on greenhouse gas emissions.

The pressure has been building on India and China to agree to some kind of emission cuts. The EU has been saying that it is the only way to convince the US and Australia to undertake commitments in the new phase of the Kyoto Protocol - something both countries stayed off saying it would hurt their economies without any real gain.

The ministry reached this figure by back calculating and claiming that several government programmes already address the key factors increasing vulnerability to climate change. The government has claimed that 22 programmes in crop management, 19 in drought proofing, 19 in health, six in risk finance, six in disease control, 12 in forestry and 30-odd in poverty alleviation fit the bill.

But some experts have contested these figures, proffered earlier in official meetings. While it is understood that India would use such a line of defence along with other more robust weapons in its armoury to defend any move to push it into commitments, experts have warned that such claims would not pass close scrutiny.

The next battle of sorts on the issue could come at the September 22 US-hosted meeting of major economies on energy security and climate change - what is informally called the meeting of the biggest polluters, the way US defines it - where India is also an invitee. At the last G8 meeting, the PM had laid down India's line that it would, despite its economic development, not exceed the per capita emissions beyond what the developed countries have or reach.

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(7) TECHNOLOGICAL FIX: TAMING THE TSUNAMI RISK

New Scientist, 15 September 2007
http://technology.newscientist.com/article.ns?id=mg19526215.700&feedId=online-news_rss20

A "GPS shield" that works in real time could save lives by quickly warning of potential tsunamis.

The German-Indonesian Tsunami Early Warning System (GITEWS) is being developed by a team led by Jörn Lauterjung of the National Research Centre for Geosciences in Potsdam, Germany. Unlike a GPS method proposed last year, which detects seismic waves transmitted through the Earth's crust to distant receivers, the new ground-based system takes real-time measurements of vertical ground motion - the type of fault movement more likely to produce tsunamis (Journal of Geophysical Research, DOI: 10.1029/2006JB004640).

To protect the Indian Ocean region, the proposed shield would include an array of 18 GPS stations.

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(8) CONFERENCE ON INTEGRITY IN SCIENCE FOCUSES ON IPCC

Jennifer Marohasy, 16 September 2007
http://www.jennifermarohasy.com/blog/archives/002299.html

A claimed "first world conference on research integrity" opens in Lisbon, Portugal, today. The conference media release explains: "The controversies surrounding the recent assessment report of the United Nations' Intergovernmental Panel on Climate Change (IPCC) demonstrates how research integrity is a critical issue not only for the science community, but for politicians and the society as a whole as well. In August 2007 the US National Aeronautics and Space Administration (NASA) had to withdraw previous published historical climate data.

The incident came after a British mathematician discovered that the sources used by the Intergovernmental Panel for Climate Change (IPCC) have disregarded the positions of weather stations, plus intentionally using outdated data on China from 1991 and ignoring revised data on the country from 1997.

Now 350 concerned scientists, scientific managers and magazine editors from around the world are scheduled to attend the event in Lisbon, initiated and organised by the European Science Foundation (ESF) and the US Office for Research Integrity (ORI). It marks a milestone for the science community as it will link all those concerned parties in a global effort to tackle the issue head on.

"At the very least, countries should know how misconduct will be handled in other countries and whom to contact if they have questions. A more ambitious goal is to begin to harmonize global policies relating to research integrity," says Conference Co-Chair Nicholas Steneck from the University of Michigan.

"By now there are no consistent global standards for defining and responding to major misconduct in research. Definitions and practices vary from country to country and even institution to institution. Improper practices that could be ignored in one country could get a researcher dismissed from a position in another country," Steneck adds.

The conference will be focusing on both individual and institutions' responsibilities, and of funding agencies as well as publishers, according to Conference Co-Chair Tony Mayer from the Nanyang Technological University in Singapore. Mayer is also the former Senior Science Policy Adviser to the ESF.

Jose-Mariano Gago, the Portuguese Minister of Science, Technology and Higher

Education, Janez Potocnik, the European Commissioner for Research, Angel Gurri?a, the Secretary-General, Organisation for Economic Co-operation and Development (OECD), and Tim Hunt from the Cancer Research UK, South Mimms will kick off the event by participating in the opening talks. .

In his keynote address, Paul David form the Oxford University, UK, and Stanford University, Palo Alto, U.S., will give an overview on analytical and empirical studies of ORI on the problem of scientific misconduct. David is well known for his research in the economics of science and technology, with special reference to the impact of intellectual property rights protections on the direction and conduct of 'open science' research.

Howard Alper, Professor of Chemistry and Vice-President Research at the University of Ottawa, and winner of the first Gerhard Herzberg Canada Gold Medal in Science and Engineering, Canada's most prestigious award for science and engineering, is also affiliated with the International Development Research Centre (IDRC), Canada, because he is also an expert in the situations in developing and emerging countries. From his experiences he presents the best practices for the benefit of a society.

Herbert Gottweis from the Institute of Political Sciences, University of Vienna, Austria, will reconsider the Hwang gate from 2005 and present the lessons learned. Gottweis is vice-president of the Austrian Research Fund (FWF) and coordinator of the PAGANINI ("Participatory Governance and Institutional Innovation") project of the European Union.

The conference will also touch on the situation in developing and emerging countries, where scientists often have to produce publications in numbers under pressure to achieve the formal scientific qualifications. Thus voices from Africa, like that from Amaboo Dhai, University of the Witwatersrand Medical School, Steve Biko Centre for Bioethics, Parktown, South Africa, will also be heard. In addition, Annette Flanagin of JAMA, the Journal of the American Medical Association, and Muza Gondwe, University of Malawi, College of Medicine, Blantyre, will contribute their experiences from the "African Journal Partnership Project". Flanagin is the author of the JAMA Manual of Style: A Guide for Authors and Editors, now in it's 10th edition.

In other words the World Conference on Research Integrity focuses on an open sore of science, taking into consideration the reality, legal and institutional aspects, as well as regional, social and psychological environments in which scientists work.It intends to be the beginning of the healing process.

For more information on the conference please go to:
http://www.esf.org/conferences/researchintegrity

Live news and photos from the event will be posted on the ESF Media Centre:
http://www.esf.org/media-centre.html

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(9) RUSSIAN SCIENTISTS MULL ANTI-ASTEROID SYSTEM

Itar-Tass, 17 September 2007
http://www.itar-tass.com/eng/level2.html?NewsID=11876528&PageNum=0

MOSCOW, September 17 (Itar-Tass) - On the day of the 150th anniversary of the birth of Eduard Tsiolkovsky, the founder of world cosmonautics, scientists meet in Kaluga to discuss matters aimed at protecting the Earth from asteroids.

Alexander Vorobyov, press secretary of the Roscosmos (Russia's Federal Space Agency) has told Itar-Tass that this problem will be one of central subjects of discussion at the 42nd scientific readings on prospects for the development of cosmonautics. The Readings begin in Kaluga, the birth town of the great scientist, on Monday.

The importance of the problem of creating a system for the protection of the Earth from asteroids is connected with the fact that, according to estimates by specialists, Asteroid Apophis will fly by the Earth at a distance of less than 40,000 km in the year 2029, and that there is a high (sic!) probability of the asteroid's collision with the Earth in 2036.

EDITOR'S NOTE: The impact probability is actually minute and is almost certainly going to become zero with additional observations. BJP

========== LETTERS ==========

(10) GLOBAL WARMING CAUSES NASA MELTDOWN?

Oliver Manuel [omatumr@yahoo.com]

Hi Benny,

Steve McIntyre at Climate Audit seems to be witnessing a meltdown at NASA as he continues to find evidence of changes in the experimental temperature database which Dr. James E. Hansen used as evidence for global warming.
http://www.climateaudit.org/?p=2049 - more-2049

I suspect that NASA has used some of the same tricks to peddle AGW (anthropologic global warming) that it used to promote the myth that planet Earth is heated by a steady, H-fusion reactor in the core of a Hydrogen-filled Sun.

Since the 1969 Apollo Mission returned the first lunar soils loaded with solar-wind-implanted material, NASA has successfully manipulated the press and access to funds, samples, and Lunar Science Conferences to hide experimental evidence that planet Earth is heated by a neutron star at the core of an iron-rich Sun - the remains of an object that exploded five (5) billion years ago and ejected the material that now orbits it.

With kind regards,

Oliver K. Manuel
Emeritus Professor, Nuclear Chemistry
http://www.omatumr.com?http://www.ballofiron.com

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(11) HISTORICAL CONTEXT AND WEATHER EXTREMES

Matti Virtanen [matti.virtanen@yle.fi]

Hello Benny,

here's a quote with some perspective:

"That's why I'm always cautious when people say the weather extremes now are at their greatest. Without historical context you lose control and you rush to proclaim every latest weather phenomenon as extreme or unprecedented," Hinder says.
Source: http://www.physorg.com/news109127202.html

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viewpoints expressed in the articles and texts and in other CCNet contributions do not necessarily reflect the opinions, beliefs and viewpoints of the editor.
http://www.staff.livjm.ac.uk/spsbpeis/

Subject: Earth Institute News Roundup 8/1/07 to 8/31/07
From: "David Phelan" <dphelan@ldeo.columbia.edu>
Date: Wed, 5 Sep 2007 15:34:20 -0400
To: "Media Round-Up" <dphelan@ldeo.columbia.edu>

Attached is the news coverage of The Earth Institute and its affiliated centers and programs. Please note that the coverage is not meant to be exhaustive, but highlights the most notable media hits. The list is sorted first by three categories (Earth Institute, Lamont-Doherty and Misc.) and then by descending date.

If you see or hear of any news related to The Earth Institute, its centers or programs, please send an e-mail to David Phelan at dphelan@ldeo.columbia.edu. Please feel free to add/change/delete subscriptions to the bi-weekly news service by sending an e-mail request to the same address.

Thank you,
David Phelan

Earth Institute

Big Apple To Get A Big Bite Of India
NEWSPost India, India - Aug 30, 2007
And Columbia University in collaboration with the **Earth Institute** hosts a conference on India's looming water crisis. 'Cherishing Democracy, Sharing ...

Conference Mulls African Agriculture
Forbes, NY - Aug 30, 2007 (Also picked up by The Associated Press)
"This is the first Africa Green Revolution country," said **Pedro Sanchez**, of the **Earth Institute** at Columbia University. He said government subsidies of 75 ...

Official list of disaster victims still untabulated
The Times-Picayune - NOLA.com, LA - Aug 29, 2007 (Also appeared in USA Today.com)
A list of names can be found at the **Earth Institute's** Web site dedicated to Katrina victims at www.katrinalist.columbia.edu/. Laura Maggi can be reached at ...

Public health programs have huge benefits
Taipei Times, Taiwan - Aug 27, 2007 (Also found in The Nation (Thailand), The Korea Herald)
By **Jeffrey Sachs** Life expectancy in the world's high-income countries is now 78 years, while it is only 51 years in the least-developed countries, ...

Private sector approach to solving the problems of Sierra Leone
Times Online, UK - Aug 27, 2007
According to **Jeffrey Sachs**, the economist, the system is also wasteful. Professor Sachs estimates that out of every dollar given to Africa in aid, ...

Africa: The All African Darfur Force
AllAfrica.com, Washington - Aug 22, 2007
... latest being lack of resources in the region and it is being offered by no other than **Jeffrey Sachs**, director of Columbia University's **Earth Institute**. ...

Africa: The All African Darfur Force
AllAfrica.com, Washington - Aug 22, 2007
... latest being lack of resources in the region and it is being offered by no other than **Jeffrey Sachs**, director of Columbia University's Earth Institute. ...

Points of view
The Herald, UK - Aug 21, 2007
This year's Reith lecturer, Professor **Jeffrey Sachs**, the leading economist, effectively demonstrated that civilisation as we know it can only survive if, ...

World's Poorest, Living on $1, Get Hypothetical Help in Survey
Bloomberg - Aug 21, 2007
Millennium Promise was founded by the economist **Jeffrey D. Sachs** to help ease extreme poverty in African villages. Sixty percent of the survey's respondents ...

Climate Change as a Global Challenge: The Road to Bali
UN Chronicle, NY - Aug 20, 2007
Similar positive views were expressed by **Jeffrey Sachs**, Special Advisor to the UN Secretary-General and Director of the Earth Institute at Columbia ...

Climate Change as a Global Challenge: The Road to Bali
UN Chronicle, NY - Aug 20, 2007
Similar positive views were expressed by **Jeffrey Sachs**, Special Advisor to the UN Secretary-General and Director of the Earth Institute at Columbia ...

Ending Malaria Deaths in Africa (extended version)
Scientific American - Aug 19, 2007
By **Jeffrey D. Sachs** For Africa, the epicenter of the world's malaria scourge, an historic breakthrough in health and economic development is now within ...

Sachs: Strong Reserves Mean Asian Bourses Can Face Funds Crisis
Bernama, Malaysia - Aug 18, 2007
Jeffrey D. Sachs said today. The first holder of the Royal Prof Ungku Aziz Chair at the Centre for Poverty and Development at Universiti Malaya is confident ...

Asia has sufficient reserves to prevent liquidity crisis
Economic Times, India - Aug 17, 2007
... the near term as the region's central banks have sufficient reserves to prevent a liquidity crisis, American economist Professor **Jeffrey D Sachs** says. ...

Uganda's donors switching to budget support
East African, Kenya - Aug 13, 2007
Prof **Jeffrey Sachs** of the **Earth Institute** in Columbia University, visiting Kampala in January this year, strongly criticised the practice of passing donor ...

Economist Sachs to speak on Malaysia's growth
Business Times - Malaysia, Malaysia - Aug 13, 2007
Sachs is also director of The **Earth Institute**, quetelet professor of sustainable development, and professor of health policy and management at Columbia ...

The heat is on: It's rock and roll in the skies
Times of India, India - Aug 11, 2007
INTENSE STORMS: **Arthur M Greene**, associate research scientist, International Research Institute for Climate and Society, the **Earth Institute**, ...

Joseph Graziano: Tackling arsenic poisoning in Bangladesh
The Lancet – Aug 11, 2007 (subscription required)
Also cited: **Alexander Van Geen, Lamont-Doherty Earth Observatory**

As Earth gets hotter, we could get wetter
New York Daily News, NY - Aug 10, 2007
"You cannot associate any one storm with global warming," said **Cynthia Rosenzweig**, a senior research scientist at the **Earth Institute** at Columbia University ...

Africa can profit from Green Revolution: Sachs
Hindu, India - Aug 9, 2007
... eminent development economist, special adviser to the United Nations Secretary-General and Director of the **Earth Institute** at Columbia University. ...

Lamont-Doherty

New York Research Institute Hopes to Go With the Flow
Science Magazine - Aug 2007
Researchers from **Lamont-Doherty Earth Observatory** and Rensselaer Polytechnic Institute have measured temperature, salinity, and other variables in a few spots along the Hudson River.

Warming Will Exacerbate Global Water Conflicts
The Washington Post – Aug 20, 2007
Richard Seager, a senior researcher at **Lamont-Doherty Earth Observatory** of Columbia University, looked at 19 computer models of the future under current global warming trends.

Computer network would monitor Hudson 24/7
The Journal News / Lohud.com, NY - Aug 16, 2007
We have to look at it as a movie," said **Robin Bell**, a senior scientist at Columbia University's **Lamont-Doherty Earth Observatory** in Rockland County. ...

Cold wars: Russia claims Arctic land
Geotimes, VA - Aug 1, 2007
"It becomes a matter of definition," says **Jim Cochran**, a marine geophysicist at **Lamont-Doherty Earth Observatory** in Palisades, NY The ridge is a narrow band ...

Misc.

Editorial vs. news
Grist Magazine, WA - Aug 30, 2007
... environmentalists, climate change models, and climatologists **James Hansen** and Gavin Schmidt over a statistically insignificant data correction. ...

What It Costs Us
Washington Post - Aug 27, 2007
But according to climate scientists such as NASA's **James Hansen**, if we hope to have a chance of avoiding dangerous changes to Earth's climate, we don't have ...

Hot rhetoric in climate fight over a quarter-degree fix
Seattle Times - Aug 26, 2007
McIntyre, who has spent years seeking flaws in studies pointing to human-driven climate change, traded broadsides on the Web with **James Hansen**, ...

Subject: RE: Peak Oil and Global Temperature
From: @sc.rr.com>
Date: Sun, 9 Sep 2007 07:44:57 -0400
To: "'James Hansen'" <jhansen@giss.nasa.gov>

Do you have a link to some of the engineering details for sequestering CO2 from coal or oil? Thanks.

-----Original Message-----
From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Friday, September 07, 2007 9:24 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: Peak Oil and Global Temperature

To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

Subject: RE: CO2 Sequestration
From: @sc.rr.com>
Date: Sun, 9 Sep 2007 20:02:46 -0400
To: "'James Hansen'" <jhansen@giss.nasa.gov>

Thanks. Very interesting reading.

From: gmail.com [mailto: gmail.com] **On Behalf Of** James Hansen
Sent: Sunday, September 09, 2007 8:35 AM
To:
Subject: CO2 Sequestration

Go to IPCC report on that subject: http://www.ipcc.ch/activity/srccs/index.htm

On 9/9/07, @sc.rr.com> wrote:
Do you have a link to some of the engineering details for sequestering CO2 from coal or oil? Thanks.

-----Original Message-----
From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Friday, September 07, 2007 9:24 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: Peak Oil and Global Temperature

To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

User-Agent: Microsoft-Entourage/11.3.3.061214
Date: Tue, 14 Aug 2007 09:01:21 -0400
Subject: Revision to temp records?
From: Dan J Shapley <dshapley@hearst.com>
To: <Leslie.M.McCarthy@nasa.gov>
Thread-Topic: Revision to temp records?
Thread-Index: AcfeczXidLMFCkpmEdy44gAX8tKs7w==
X-OriginalArrivalTime: 14 Aug 2007 13:01:29.0536 (UTC) FILETIME=[3AF92400:01C7DE73]

Hi Leslie,

I saw this story in the Toronto Star today (http://www6.lexisnexis.com/publisher/EndUser?Action=UserDisplayFullDocument&orgId=1019378topicId=1060300048docId=l:655133574) and wanted to check its veracity.

I hadn't heard about a revision to NASA's temp readings that would make 1934 the hottest on record (rather than 1998). If there has been a revision, please point me in the right direction, so I can understand the new results and what changed.

Thanks,
Dan

Dan Shapley
News Editor
TheDailyGreen.Com
212-649-4375

Subject: Re: Peak Oil and Global Temperature
From: @berkeley.edu>
Date: Wed, 12 Sep 2007 11:01:51 -0700
To: James Hansen <jhansen@giss.nasa.gov>
CC: @harvard.edu>

Jim, As someone returning to the energy field after some years absence, I may be out of date myself, but I think some of the statements in this article skirt the edge of reality. Basically, the concept of "peak" oil is not a valid one from a climate or energy demand perspective, because it only refers to so-called "conventional oil" Even the term "conventional" is not fixed in time and space and thus not terribly useful in many circumstances -- look at deep off-shore production, now conventional but only becoming so a couple of decades back. Even if we accept the term "conventional" to mean something fixed and we accept that half of it has been pumped, which is quite doubtful, there is plenty more oil out there in enhanced recovery (EOR) and oil sands, even before going to synfuels. See Fig 1 in the attached paper which nicely shows this. Even if we somehow were to stop at oil sands, we would have probably have at least 4 times more oil available in the future from these sources (rest of conventional, EOR, tar sands). Given proven response to price in the past, one could argue for quite a bit more. With the estimates from synfuels, of course, the estimate become vast, with perhaps 20 times more to be sold than sold in the past. Add in oil shale, and it is larger still The economic, environmental, water and other costs of doing these things (particularly oil shale), of course, are immense, but at $100 bb/oil, they will likely be tapped barring restraints of other sorts. Also, or course, the GHG per unit oil delivered to the customer goes steadily up, not a good pattern. A better term here is not "peak," which is misleading in the extreme, but "transition", i.e., to different geologic sources, efficiencies of conversion, environmental impacts, national distribution of resource holdings, etc.. This transition is already well underway with the high prices now prevalent. For example, production from Alberta oil sands (which has oil-equivalent resources exceeding those in Saudi Arabia I believe) now exceeds 1 million bbl/d and is still growing. "Conventional" is changing yet again. Hope this is useful./k p.s. I copy who may have some corrections or elaborations. At 06:27 PM 9/7/2007, you wrote: >To be removed from Jim Hansen's e-mail distribution respond with >REMOVE as subject > >http://www.columbia.edu/~jeh1 /distro_peakrevandgistemp_070907.pdf > Attachment Converted: "c:\program files\qualcomm\eudora \attach\Farrell and Brandt.pdf"

Subject: Regarding the criticisms of McIntyre et al
From: @sbsoft.com>
Date: Mon, 17 Sep 2007 20:10:16 -0400
To: <James.E.Hansen@nasa.gov>
CC: @sbsoft.com>

Dear Sir:

I don't understand your recent approach in dealing with the recent criticisms of Steve McIntyre and friends.

As you recently noted (and McIntyre agrees), none of these criticisms have a material effect on global temperature.

The credibility of GISS (and other organizations aggregating temperature data) DOES have a material impact on any analysis of global temperature.

If McIntyre shows that you have an agenda, then your data (and the conclusions supported by your data) are weakened.

By making undocumented changes to your methodology (which McIntyre subsequently dissects on his blog) you provide ammunition to those who insist that you have agenda, and that your agenda is tainting your data.

Why not adopt an ultraconservative approach in all of the changes that you make? Why not:

1. avoid making changes except in the case of outright errors
2. publicly document all changes at the time they occur
3. graciously thank McIntyre et all for any errors they bring to your attention
4. avoid making editorial statements, and let the data speak for itself.

It makes no difference whether 1934 or 1998 was warmer in the United States. But your recent statements and changes have created the impression that GISS cares about this issue, and is willing to change its methodology accordingly.

It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: Re: Peak Oil and Global Temperature
From: "wendell Tangborn" <hymet01@gmail.com>
Date: Sat, 8 Sep 2007 12:34:48 -0700
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Bob Bindschadler" <bob@igloo.gsfc.nasa.gov>

HyMet Inc.
13629 Burma Rd. SW
Vashon Island, WA 98070
Phone: 206 567 4077
Email: hymet01@gmail.com
Website: www.hymet.com

September 8, 2007

Dr. James Hansen, Director
NASA Goddard Institute for Space Studies
2880 Broadway
New York, N.Y. 10025

Dear Dr. Hansen,

I just read ***Peak Oil and Global Temperature*** on your website. How close do you think we are to reaching a 'dangerous' level of atmospheric carbon dioxide? Extrapolation of the 1958-2005 CO_2 curve, which assumes business as usual, indicates a concentration of 490 ppm in 2050, which must far exceed a dangerous level. It will reach 450 ppm in one generation, by 2037. How will we know when a truly hazardous level for life has been reached? In many respects, e.g. greatly diminished Arctic sea ice cover, it seems we may have already passed a point of no return.

I may have stumbled upon a signal that indicates a critical threshold in the global climate was reached about 1990, introduced in a 2003 paper published in Polar Geography (reprint enclosed). Also see: http://www.hymet.com /docs/POLAR%2027n04_320-338-Tangborn.pdf

In the study, daily temperature departures for 74 weather stations in the US, Europe, Asia and Australia were determined for the 1951-1999 period, based on 1932-1950 daily averages. In the 1980s an unusual seasonal pattern in these departures began to appear: for a few days each winter up to 90% of the stations were synchronized (had positive departures on the same day). The share reached 95% in 1990 and exceeded 90% 100 times throughout the 1990s. Although it is barely mentioned in the paper, I now feel certain that this phenomenon is caused by CO_2 reaching a critical concentration level (it was 350 ppm in 1990).

As CO_2 concentrations rise, wouldn't you expect the atmosphere to respond by gradually allowing the effect of greater trapped radiation to dominate temperature forcing for short periods in scattered areas? Then, as the concentration increases, its influence would tend to last a few days longer each year and affect more and more temperature observation stations throughout the world.

But to verify and better understand these findings, the study needs to be repeated and expanded by increasing the number of global stations and updating the period of record through at least 2006. If you know of anyone willing to take this on, I would be pleased to work with him (or her), and start by providing about 100 files of 1932-2006 US temperature data and the Fortran programs written for the project.

Sincerely,

Wendell Tangborn

On 9/7/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

Subject: 1934: Warmest Year on Record
From: _ @ajg.com
Date: Wed, 29 Aug 2007 09:21:22 -0500
To: James.E.Hansen@nasa.gov
CC: chuck_grassley@grassley.senate.gov, president@whitehouse.com, Senator_McCain@mccain.senate.gov, senator_lieberman@lieberman.senate.gov, senatorlott@lott.senate.gov, chuck_hagel@hagel.senate.gov, senator_reid@reid.senate.gov

Good Morning Mr. Hansen,
Today's Wall Street Journal has an article on page A14 titled, Not So Hot. Stephen McIntyre found that NASA made a technical error in standardizing the weather air temperature data post 2000. Curiously and most interesting is that these temperature mistakes were only for the United States; their net effect was to lower the average temperature reading from 2000-2006 by 0.15C.

It is interesting that Mr. Hansen has been unapologetic about NASA's error. I don't see the point of getting excited about global warming, if NASA's chief is going to ignore its error and continue about the global warming issue, when this article explicitly shows that 1934 was the warmest year on record. Ignoring facts is not very scientific; I hope that Mr. Hansen does not call himself a scientist, since he chooses to ignore truth along with Al Gore.

Subject: Mean Global Temperature - not anomaly
From: @ com>
Date: Mon, 6 Aug 2007 02:43:24 -0400
To: James.E.Hansen@nasa.gov

Hello Dr. Hansen,

Recently I have been researching various online resources for climate and temperature data. I ran across your name as an authority on the matter, and was wondering if you could be of assistance. My goal is to write a piece of software that both visualizes and sonifies the average global temperature for the past 100-200 years. I have found some excellent data on this site: http://data.giss.nasa.gov/gistemp/ however this data seems to only list anomalies whereas I am interested in the mean data.

The project that i am working on is for a college art project - my use of the data relates to the cultural significance of this data - not explicitly the scientific significance. Is this data available in a format that lists the average (not anomaly) global temp (land, oceanic, or both) since 1880? If so, is it broken down into monthly averages?

I would be very appreciative if you could provide this information or point me in the right direction. I'd be happy to send you a CD or DVD of the composition when completed.

Please let me know.

Best,

--

.com
com

Subject: RE: A Light On Upstairs?
From: "Zarembo, Alan" <Alan.Zarembo@latimes.com>
Date: Wed, 5 Sep 2007 12:40:48 -0700
To: "James Hansen" <jhansen@giss.nasa.gov>

http://www.latimes.com/news/science/la-sci-offsets2sep02,1,249680.story?ctrack=1&cset=true

Hi Dr. Hansen,
Wanted to make sure you saw my article on voluntary carbon offsets. Thanks again for your help.
Best,
Alan

Alan Zarembo
Science Writer
The Los Angeles Times
213-237-7009
Toll free 1-800-LATIMES ext. 77009
alan.zarembo@latimes.com

-----Original Message-----
From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Friday, August 10, 2007 3:10 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: A Light On Upstairs?

> To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject but this line should be included in the e-mail.

Subject: FW: NYTimes.com: 'Hottest Year' Data Meltdown
From: "DeCola, Philip L." <Philip_L._DeCola@ostp.eop.gov>
Date: Fri, 10 Aug 2007 16:26:16 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "David Rind" <drind@giss.nasa.gov>

Ruppert Murdoch has purchased the NY Times.

What data are they talking about?

Here it is in case you could not read it before.

Phil

August 10, 2007, 9:06 am

'Hottest Year' Data Meltdown

By Tobin Harshaw

Tags: global warming

You just thought you were sweating? Among global warming Cassandras, the fact that 1998 was the "hottest year on record" has always been an article of faith. Stephen McIntyre, who runs the Climateaudit blog was always puzzled by some gaps he saw in the raw data provided by NASA that supported the claim (data compiled in part by James Hansen, the climate scientist who has long accused the Bush administration of trying to "silence" him). McIntyre says he has "reverse engineered" the data to find NASA's algorithm, discovered that a Y2K bug played havoc with some of the numbers, and notified the space agency.

Michael Asher at DailyTech explains the fallout:

> NASA has now silently released corrected figures, and the changes are truly astounding. The warmest year on record is now 1934. 1998 (long trumpeted by the media as recordbreaking) moves to second place. 1921 takes third. In fact, 5 of the 10 warmest years on record now **all occur before World War II**. Anthony Watts has put the new data in chart form, along with a more detailed summary of the events.
>
> The effect of the correction on *global* temperatures is minor (some 1-2% less warming than originally thought), but the effect on the U.S. global warming propaganda machine could be huge.

Note: Many commenters on this post have assumed that the author intended the term "Cassandras" to be pejorative, and also that he was unaware that the predictions made by the prophetess Cassandra, daughter of King Priam of Troy, came true. Rather, the term was being used in its common modern sense: one whose dire predictions, true or false, go unheeded.

- Link
- E-mail This

32 comments so far...

- 1.
  August 10th,
  2007
  10:51 am

  Is this the New York Times or Fox News? The "U.S. global warming propaganda machine"? Are you kidding? The trend is toward warming, regardless of which are the peak years. How ironic that a propaganda piece complains about propaganda.

— *Posted by Paul*

- 2.
August 10th,
2007
10:58 am

Dear Sir
In much the same way shouting "fire" in a crowded room is illegal, I believe
people who can look directly at the polar ice caps melting and deny it should be incarcerated. This is a time for serious minded people to work together to solve the problems ignored by our war loving, suv driving, coal burning friends from the right. KFH

— *Posted by kevin hunter*

- 3.
August 10th,
2007
11:16 am

That corrected NASA data is for the lower 48 states, not the globe.

It is well established that the greatest effect of global warming is being seen in polar regions, which are not covered by this report.

— *Posted by Jim Stahl*

- 4.
August 10th,
2007
12:35 pm

kevin hunter--What's to solve? Warmer temperatures means longer growing seasons and less need for fossil fuel for winter heating. Sure there'll be major issues to tackle but most are technologically solvable. The major banks and the General Electrics would be happy to finance such projects.

— *Posted by MARK KLEIN, M.D.*

- 5.
August 10th,
2007
1:00 pm

As I look at the 5 year mean anomaly data in the second column, the recent years remain the highest using the rolling averages. Probably a better measure than any single year.

The agenda of Harshaw and Asher, ignoring 5 year average temperature data, polar ice cap melting and rising CO2 — clearly suspect.

— *Posted by Mark Hilberman*

- 6.
August 10th,
2007
1:20 pm

I'm a skeptic, but I still want cleaner air, lower carbon emissions and less oil dependency. I'm a skeptic because I still find it hard to believe that a century worth of data can give us clues about trends on a planet with billions of years of history. At the same time, I'm adamant about environmental issues because the benefits go beyond global warming. The benefits of increased health, cleaner air and not having to invade countries to

protect our oil supplies makes me want to buy a Prius. Also, if my skepticism is ill founded and global warming is due to human activity, we will accomplish all the goals with the same effort.

— *Posted by Peter*

- 7.
August 10th,
2007
1:25 pm

Paul–polemics and spin aside, this article points out a data correction. You may not like it as it doesn't support your point. Neither does it invalidate it. But it seems to me to be good faith data.

Kevin–The article I read does not speak of polar ice caps. It simply corrects a seemingly flawed piece of information. I think suggesting jail time is an exhuberant reaction to a straw man of your creation that did not exist in the article I read.

Jim–Your point seems reasonable.

— *Posted by Joe*

- 8.
August 10th,
2007
1:27 pm

"Among global warming Cassandras"...?

Let's review the facts so far.

1.Stephen McIntyre is a former mining industry executive.

2. Until 2003, he was employed by CGX Energy Inc as a strategic advisor, with the specific task of disproving the validity of global warming.

3. The sole purpose of his website's existence is to disprove global warming, and he retains a direct financial stake in pushing the theory that global warming is a myth.

4. Now Mr. McIntyre has claimed that, due to computer errors supposedly caused by the Y2K bug, NASA should use HIS figures in place of blank areas which NASA did not have data for...

5. NASA, operating under the direction of the Bush Administration- which is beholden to exactly the same companies to which Mr. McIntyre is beholden- quietly and without debate adopts his figures...

6. ...and suddenly the biggest piece of data proving the existece of global warming disappears.

Mr. Harshaw, I don't know if you are aware of this, but Cassandra got her reputation by always being RIGHT- but no one ever believed her until it was too late.

And you, sir, are being played for a fool.

— *Posted by Michael English*

- 9.
August 10th,
2007
1:30 pm

This is huge and startling information. I'm going bluegreen instead of straight green.

— *Posted by peter a bobley*

- 10.
August 10th,
2007
1:31 pm

I think you should also look at the 5-year mean (third column of that NASA dataset). This clearly shows that the highest value was in 2000, with several other highs in the last decade. The five-year mean is a better indicator of temperature trends than the value in any one year, which may well reflect the influence of a single extreme weather event more than general trends in climate.

— Posted by Richard Smith

- 11.
August 10th,
2007
1:37 pm

Re: MARK KLEIN's comment: "Sure there'll be major issues to tackle but most are technologically solvable." This might be the case for some areas of human activity, but is not true for many non-human species that cannot adapt and face extinction. Life is an interconnected web. If we create the conditions that drive many species to extinction, we will be living on a different planet.

— Posted by Bill Burke

- 12.
August 10th,
2007
1:38 pm

Not to mention that the "warmest years" statistic almost entirely useless, except as a shorthand for sensationalists, (of all stripes, it seems). The rest of us (tho perhaps few media outlets) recognize that the "warmest years", being outliers, are the least accurate index of central tendency, and shrug at this re-shuffling of the "Top 10". A simple linear graphing of the new NASA data still shows notable warming across the past three decades.

— Posted by warner d

- 13.
August 10th,
2007
1:39 pm

These kinds of pop media posts on serious scientific issues are I believe a major contributor to the criminal politicization of science. No less than the New York Times, by allowing such unconsidered posts, enables the trivialization of a solid and growing body of evidence supporting the global warming hypothesis (NOT PROPAGANDA), culled by hundreds of scientists worldwide. This hypothesis is not dependent on the single datum of "warmest year on record" but by thousands of other credible measurements, peer-reviewed and vetted, that are apparently invisible and may be incomprehensible to The Opinionators. I suggest the New York Times keep their bloggers away from such serious topics until they've learned how science works.

— Posted by Leon Dominguez

- 14.
August 10th,
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I'm all for society being more responsible in terms of pollution and conservation... in fact I support any move away from petroleum fuels, whatever the excuse is that motivates the masses so be it; even beleiving an elaborate lie and acting on it is better than inaction... but the true threat to the world is to be found in our ecoomic dependence on foreign oil, not the supposed global warming caused by burning those fuels.

— Posted by Mark from Philly

- 18.
August 10th,
2007
1:56 pm

Amen to the three above comments. To polarize this into a political issue and to belittle "global warming Cassandras" is to simply choose destruction over survival by never addressing the problem and blaming pea-brained fellow humans, all of whom are sunk and sinking unless we dramatically and quickly come up with non-COs emitting alternatives....Already hardly likely, but we should at least die fighting...We are indeed at a climate crisis, not because of what surface temperatures have or have not done before and after WWII, but because we currently have the highest human population EVER in the history of the earth, and the bulk of it is attempting to industrialize with completely unsustainable methods. The total of 500 million cars worldwide is unprecedented, and has almost doubled since 1998 alone–If it doubled in a mere 20 years, what is to happen in the next 20?
When I first learned to drive at age 16 in 1984, the majority of cars in the D.C. area not only obeyed traffic laws, but went below the speed limit, and people were actually ticketed for going 57 or 58. Now the trend towards utter lack of enforcement has led to absolutely lawlessness and flagrant disregard for all speed limits on every major highway and road, to the point that everyone feels they have to be aggressive in return just to survive. This trend is a huge failure of public policy....Similarly, we are accelerating our consumption of energy because of the complete lack of punishment or incentive for alternatives by either government, corporations, or bands of good citizens.
For the New York Times (my beloved Times, even though I am a lifelong native Washingtonian) to print such a foolishly polarizing statement, to insist that global warming is a political, not a survival issue, really wounds me. But perhaps a Fox fa**ist really did infiltrate the paper via some nasty web bug. Hallelujah that the Times provides such a revered and public forum so that Andrew Revkin is heard.
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— Posted by Deborah Klaus

- 19.
August 10th,
2007
2:04 pm

Re: response of Mark Klein, M.D.

Dear Dr. Klein,

See number five, below:

The sort of leaders we need now are not those who promise ultimate victory over Nature through perseverance in living as we do right now, but those with the courage and intelligence to present the world what appears to be Nature's stern but reasonable surrender terms:

1. Reduce and stabilize your population.

2. Stop poisoning the air, the water, and the topsoil.

3. Stop preparing for war and start dealing with your real problems.

4. Teach your kids, and yourselves, too, while you're at it, how to inhabit a small planet without helping to kill it.

5. Stop thinking science can fix anything if you give it a trillion dollars.

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7. And so on. Or else.

Kurt Vonnegut, Jr.
Fates Worse Than Death, 1991
Chapter XI

— *Posted by Robert Sidney LaVelle*

- 20.
August 10th,
2007
2:04 pm

The conclusions are not supported by the data—the data is ANOMALIES, that is deviations from the period average, not the absolute temperature. Thus if the period average for 1934 (30 yr) is colder, a lower 1934 temperature will produce a higher anomaly. In fact, the global temperature index on the same site shows that the average around 1934 was much lower than the average around 1998: the conclusion is that 1998 was hotter.

In fact, if the factors producing random variation in temperature have not changed much, the anomalies should be evenly distributed over time, regardless of the trend.

— *Posted by mike zimmerman*

- 21.
August 10th,
2007
2:10 pm

NASA's corrected data shows that the last 9 years are consistently warmer than normal. There is no other non-overlapping 9-year period in the entire database since 1880 that is as warm as the most recent 9-yr period. If there is global warming it would be identified from a persistent warming over a long period. Nine years may not be long enough,to justify a definitive conclusion but a pattern such as this cannot be ignored.The fact that 1934 was warmer than 1998 is not valid support for denial of the onset of detectable global warming.

— *Posted by Adelfang*

- 22.
August 10th,
2007
2:14 pm

Dr. Klein: your argument about "technological fixes" would be easier to accept if the earth were not (unfortunately in context) a sphere. Yes, as the Earth warms, land may become arable further north, and substantial natural resources may become open to exploration.

The cold regions that will become warmer are relatively small. The hot ones that will become hotter are huge. When large sections of South America, Africa, and Asia become too hot to live in — and vast populations of impoverished refugees start migrating north and south into more developed countries — what "technological fixes" do you propose?

— Posted by Kip Crosby

- 23.
August 10th,
2007
2:17 pm

Not being a scientist I do not know whether there is global warming or not. I do not give much credense to the rantings and ravings of the far left or the far right. However, when I do not know
the answer I would take the position of proceding
with caution.

— Posted by David Baker

- 24.
August 10th,
2007
2:19 pm

Go to the DailyTech page, follow the link to the corrected data, copy the columns and plot them in SPSS with a loess smoothed trend line.
Then tell me you're not scared...

— Posted by William Feuer

- 25.
August 10th,
2007
2:40 pm

As I understand it, the argument for manmade global warming points out a cluster of recent years which are all among the warmest on record, not just a single blip in the data due to normal fluctuations as in 1934. The point is, if decreasing the manmade component in warming can reduce the overall severity of the warming and its negative consequences, we should do it. And as one reader pointed out, there are many other positive reasons to do so, such as decreasing our dependence on oil, which we need to do anyway before it runs out.

— Posted by Deborah Moran

- 26.
August 10th,
2007
3:00 pm

Climate change science is not (as skeptics seem to believe) like a "house of cards", ready to tumble down through a singular study or "data meltdown." Rather, climate change science is like a complex puzzle, many of the pieces having been firmly in place for over 100 years, becoming further resolved and assembled in the gradual process that is science. The pace of assembly has quickened substantially in recent decades to the point that the puzzle's essential landscape and image are clear. At most, a new study (or "data meltdown") may require that a piece or two need to be modified in shape or tint, but the basic picture being assembled remains firmly in place. It seems that the climate change "alarmists" are not the scientists who methodically spell out for us a very sobering picture of our future, lest we change, but those who think this well-grounded understanding of real processes may be overthrown through a singular and sudden bit of news. I wish it were so, but wishful thinking is not a solution in this case.

— Posted by David Robinson

- 27.
August 10th,
2007
3:01 pm

Basically what Chris Hardin said above. Everytime the validity of global warming is debated I am incredulous. I guess I shouldn't be though. The naysayers believe it is a crisis as well. They are just trying to make as much money as possible, as professional naysayers, to live normally when the ice caps are finally gone.

— Posted by Peter Mooney

- 28.
August 10th,
2007
3:02 pm

The most stable indicators all suggest steady warming: glaciers melting, sea-ice decreasing, permafrost thawing, bore-holes warming up. Are all those data fabricated or mis-analyzed too?

— Posted by Bill Softky

- 29.
August 10th,
2007
3:36 pm

Peter–Were claims of global climate change based only on a 100-year record, you would be right to be a skeptic. However, reliable climate records now stretch back several hundred thousand years thanks to ice core, tree rings, and other long-term indicators.

— Posted by Stephen Cox

- 30.
August 10th,
2007
3:52 pm

I don't get the spin on this one, it looks like a good example of scientific progress at work. one group points out an error in another group's work. the other group updates their method to account for it, and publishes the data. the essential hypothesis is still supported by the data–the trend is obviously significant for the US and the world, so what's the story here?

also, if you had any idea of what happened in 1934 (think dust bowl...), and the indication is that is the direction we are headed, maybe you wouldn't be so quick to jump on this one.

— Posted by charlie

- 31.
August 10th,
2007
4:03 pm

One life at a time dear Deborah. I find it very interesting that Neanderthal Christians Biblically believe that the end of the world will be by fire but refuse so remarkably to believe that combustion is doing just that. Analogous to the days of Noa when doom was so easily discounted is today. The added component of those served by an agenda of denial makes me say, "Is not God great"?

— Posted by dea

- 32.
August 10th,
2007
4:08 pm

Even if this were true, which I doubt (come on, a Y2K bug? Please!), what is the point of focusing on the

contiguous states of the USA? By surface area, that's only about 1.5% of the entire globe, after all. Check out this animation from NASA, and look at the BIG picture ...

http://www.giss.nasa.gov/research/news/20070208/169068m ain_temp_anom_w_date_320×240.mpg

Also, if you want to read a serious debunking of some of the dubious "scientific" methods practiced by Steve McIntyre and his pals, check here ...

http://www.realclimate.org/index.php?p=121

If only we could somehow sequester all the energy from the effort that people like McIntyre, the Bush admin., etc. put into disproving global warming, THEN we'd have our alternative energy source!

— Posted by Steve Gaurin

Subject: FW: NYTimes.com: 'Hottest Year' Data Meltdown
From: "DeCola, Philip L." <Philip_L._DeCola@ostp.eop.gov>
Date: Fri, 10 Aug 2007 16:31:15 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "David Rind" <drind@giss.nasa.gov>

I see that the data is only for US. Those dummies!

Phil

Ruppert Murdoch has purchased the NY Times.

What data are they talking about?

Here it is in case you could not read it before.

Phil

August 10, 2007, 9:06 am

'Hottest Year' Data Meltdown

By Tobin Harshaw

Tags: global warming

You just thought you were sweating? Among global warming Cassandras, the fact that 1998 was the "hottest year on record" has always been an article of faith. Stephen McIntyre, who runs the Climateaudit blog was always puzzled by some gaps he saw in the raw data provided by NASA that supported the claim (data compiled in part by James Hansen, the climate scientist who has long accused the Bush administration of trying to "silence" him). McIntyre says he has "reverse engineered" the data to find NASA's algorithm, discovered that a Y2K bug played havoc with some of the numbers, and notified the space agency.

Michael Asher at DailyTech explains the fallout:

> NASA has now silently released corrected figures, and the changes are truly astounding. The warmest year on record is now 1934. 1998 (long trumpeted by the media as recordbreaking) moves to second place. 1921 takes third. In fact, 5 of the 10 warmest years on record now **all occur before World War II.** Anthony Watts has put the new data in chart form, along with a more detailed summary of the events.
>
> The effect of the correction on *global* temperatures is minor (some 1-2% less warming than originally thought), but the effect on the U.S. global warming propaganda machine could be huge.

Note: Many commenters on this post have assumed that the author intended the term "Cassandras" to be pejorative, and also that he was unaware that the predictions made by the prophetess Cassandra, daughter of King Priam of Troy, came true. Rather, the term was being used in its common modern sense: one whose dire predictions, true or false, go unheeded.

- Link
- E-mail This

32 comments so far...

- 1.
  August 10th,
  2007
  10:51 am

Is this the New York Times or Fox News? The "U.S. global warming propaganda machine"? Are you kidding? The trend is toward warming, regardless of which are the peak years. How ironic that a propaganda piece complains about propaganda.

— *Posted by Paul*

- 2.
August 10th,
2007
10:58 am

Dear Sir
In much the same way shouting "fire" in a crowded room is illegal, I believe
people who can look directly at the polar ice caps melting and deny it should be incarcerated. This is a time for serious minded people to work together to solve the problems ignored by our war loving, suv driving, coal burning friends from the right. KFH

— *Posted by kevin hunter*

- 3.
August 10th,
2007
11:16 am

That corrected NASA data is for the lower 48 states, not the globe.

It is well established that the greatest effect of global warming is being seen in polar regions, which are not covered by this report.

— *Posted by Jim Stahl*

- 4.
August 10th,
2007
12:35 pm

kevin hunter–What's to solve? Warmer temperatures means longer growing seasons and less need for fossil fuel for winter heating. Sure there'll be major issues to tackle but most are technologically solvable. The major banks and the General Electrics would be happy to finance such projects.

— *Posted by MARK KLEIN, M.D.*

- 5.
August 10th,
2007
1:00 pm

As I look at the 5 year mean anomaly data in the second column, the recent years remain the highest using the rolling averages. Probably a better measure than any single year.

The agenda of Harshaw and Asher, ignoring 5 year average temperature data, polar ice cap melting and rising CO2 — clearly suspect.

— *Posted by Mark Hilberman*

- 6.
August 10th,
2007
1:20 pm

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I guess the suggestion is that the "U.S. global warming propaganda machine" was going around saying that 1998 was the hottest year on record in the lower 48 states, and that this data shows that they are liars. But can you find any reference of someone spouting about 1998 being the hottest year on record in the lower 48 states? If anything, you will see claims that 1998 was the hottest year on record, period–and 1998 was (at the time) the hottest year on record, if you look at the global data, which is obviously more relevant to the issue of "global" warming than data for the lower 48 states. (Of course, 1998 has since been supplanted by 2005 as the hottest year on record.)

It's regrettable that people on either side draw attention to tiny pieces of data (such as the temperature in any one year), when it is the long-term trends that are of true significance. But if you're going to attack someone on the basis that they don't have their facts straight, then please attack an actual individual or organization instead of a straw man.

— *Posted by Chris Hardin*

- 15.
August 10th,
2007
1:45 pm

yeah, let's plug those "corrected figures" into excel and plot a trend line. then we'll talk.

to save you the trouble, it's still obvious from charting these numbers that there's an unambiguous warming trend. and it's accelerating.

— *Posted by le_sacre*

- 16.
August 10th,
2007
1:50 pm

The term "hottest year on record" isn't appropriate unless you're talking about global climate. But you're only talking about the lower 48 states. Why would you use such misleading language if you're trying to educate people? By the same token, why use terms like "U.S. global warming propaganda machine" and use scare quote around the word "silence." Hansen claimed that NASA tried to silence him, not "silence" him.

If you want to discuss facts, there's plenty to discuss. If you want to use inflammatory and misleading language that is certainly your prerogative, but aren't there more appropriate places to do that than the New York Times?

NB: Cassandra was right, remember? Her curse was to accurately predict the future but not to be believed. So calling someone a Cassandra is to imply that they are correct but unpopular.

— *Posted by Debra*

- 17.
August 10th,
2007
1:51 pm

Global Warming... just another excuse for activists to go around blaming humankind for something that occurs naturally. In 10 years Global Warming will be in the same category as the gas crisis (of the 70's), the world population crisis (of the 70's)... and of course the global cooling crisis (of the 70's)

Scientists may agree that temps are currently going up, but they know as much about what the future holds as they know about life on other planets.

I'm all for society being more responsible in terms of pollution and conservation... in fact I support any move away from petroleum fuels, whatever the excuse is that motivates the masses so be it; even beleiving an elaborate lie and acting on it is better than inaction... but the true threat to the world is to be found in our ecoomic dependence on foreign oil, not the supposed global warming caused by burning those fuels.

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The conclusions are not supported by the data—the data is ANOMALIES, that is deviations from the period average, not the absolute temperature. Thus if the period average for 1934 (30 yr) is colder, a lower 1934 temperature will produce a higher anomaly. In fact, the global temperature index on the same site shows that the average around 1934 was much lower than the average around 1998: the conclusion is that 1998 was hotter.

In fact, if the factors producing random variation in temperature have not changed much, the anomalies should be evenly distributed over time, regardless of the trend.

— *Posted by mike zimmerman*

- 21.
August 10th,
2007
2:10 pm

NASA's corrected data shows that the last 9 years are consistently warmer than normal. There is no other non-overlapping 9-year period in the entire database since 1880 that is as warm as the most recent 9-yr period. If there is global warming it would be identified from a persistent warming over a long period. Nine years may not be long enough,to justify a definitive conclusion but a pattern such as this cannot be ignored.The fact that 1934 was warmer than 1998 is not valid support for denial of the onset of detectable global warming.

— *Posted by Adelfang*

- 22.
August 10th,
2007
2:14 pm

Dr. Klein: your argument about "technological fixes" would be easier to accept if the earth were not (unfortunately in context) a sphere. Yes, as the Earth warms, land may become arable further north, and substantial natural resources may become open to exploration.

The cold regions that will become warmer are relatively small. The hot ones that will become hotter are huge. When large sections of South America, Africa, and Asia become too hot to live in — and vast populations of impoverished refugees start migrating north and south into more developed countries — what "technological fixes" do you propose?

— Posted by Kip Crosby

- 23.
August 10th,
2007
2:17 pm

Not being a scientist I do not know whether there is global warming or not. I do not give much credense to the rantings and ravings of the far left or the far right. However, when I do not know
the answer I would take the position of proceding
with caution.

— Posted by David Baker

- 24.
August 10th,
2007
2:19 pm

Go to the DailyTech page, follow the link to the corrected data, copy the columns and plot them in SPSS with a loess smoothed trend line.
Then tell me you're not scared...

— Posted by William Feuer

- 25.
August 10th,
2007
2:40 pm

As I understand it, the argument for manmade global warming points out a cluster of recent years which are all among the warmest on record, not just a single blip in the data due to normal fluctuations as in 1934. The point is, if decreasing the manmade component in warming can reduce the overall severity of the warming and its negative consequences, we should do it. And as one reader pointed out, there are many other positive reasons to do so, such as decreasing our dependence on oil, which we need to do anyway before it runs out.

— Posted by Deborah Moran

- 26.
August 10th,
2007
3:00 pm

Climate change science is not (as skeptics seem to believe) like a "house of cards", ready to tumble down through a singular study or "data meltdown." Rather, climate change science is like a complex puzzle, many of the pieces having been firmly in place for over 100 years, becoming further resolved and assembled in the gradual process that is science. The pace of assembly has quickened substantially in recent decades to the point that the puzzle's essential landscape and image are clear. At most, a new study (or "data meltdown") may require that a piece or two need to be modified in shape or tint, but the basic picture being assembled remains firmly in place. It seems that the climate change "alarmists" are not the scientists who methodically spell out for us a very sobering picture of our future, lest we change, but those who think this well-grounded understanding of real processes may be overthrown through a singular and sudden bit of news. I wish it were so, but wishful thinking is not a solution in this case.

— Posted by David Robinson

- 27.
August 10th,
2007
3:01 pm

Basically what Chris Hardin said above. Everytime the validity of global warming is debated I am incredulous. I guess I shouldn't be though. The naysayers believe it is a crisis as well. They are just trying to make as much money as possible, as professional naysayers, to live normally when the ice caps are finally gone.

— Posted by Peter Mooney

- 28.
August 10th,
2007
3:02 pm

The most stable indicators all suggest steady warming: glaciers melting, sea-ice decreasing, permafrost thawing, bore-holes warming up. Are all those data fabricated or mis-analyzed too?

— Posted by Bill Softky

- 29.
August 10th,
2007
3:36 pm

Peter–Were claims of global climate change based only on a 100-year record, you would be right to be a skeptic. However, reliable climate records now stretch back several hundred thousand years thanks to ice core, tree rings, and other long-term indicators.

— Posted by Stephen Cox

- 30.
August 10th,
2007
3:52 pm

I don't get the spin on this one, it looks like a good example of scientific progress at work. one group points out an error in another group's work. the other group updates their method to account for it, and publishes the data. the essential hypothesis is still supported by the data–the trend is obviously significant for the US and the world, so what's the story here?

also, if you had any idea of what happened in 1934 (think dust bowl...), and the indication is that is the direction we are headed, maybe you wouldn't be so quick to jump on this one.

— Posted by charlie

- 31.
August 10th,
2007
4:03 pm

One life at a time dear Deborah. I find it very interesting that Neanderthal Christians Biblically believe that the end of the world will be by fire but refuse so remarkably to believe that combustion is doing just that. Analogous to the days of Noa when doom was so easily discounted is today. The added component of those served by an agenda of denial makes me say, "Is not God great"?

— Posted by dea

- 32.

August 10th,
2007
4:08 pm

Even if this were true, which I doubt (come on, a Y2K bug? Please!), what is the point of focusing on the contiguous states of the USA? By surface area, that's only about 1.5% of the entire globe, after all. Check out this animation from NASA, and look at the BIG picture ...

http://www.giss.nasa.gov/research/news/20070208/169068main_temp_anom_w_date_320x240.mpg

Also, if you want to read a serious debunking of some of the dubious "scientific" methods practiced by Steve McIntyre and his pals, check here ...

http://www.realclimate.org/index.php?p=121

If only we could somehow sequester all the energy from the effort that people like McIntyre, the Bush admin., etc. put into disproving global warming, THEN we'd have our alternative energy source!

— Posted by Steve Gaurin

Subject: RE: USA temperatures - question from USA TODAY
From: "Rice, Doyle" <drice@usatoday.com>
Date: Wed, 29 Aug 2007 12:36:03 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, <rruedy@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, <James.E.Hansen@nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Jim
Thank you for sending this clarification. I also received the graphs from Makiko.

So is it correct to say that NASA's data is more accurate than NCDC's since it has more sources? In the media, it would be ideal to refer to one source rather than two. Traditionally we've used NCDC's data.

And globally, we usually use the Hadley Centre data...
http://www.cru.uea.ac.uk/cru/info/warming/

Doyle Rice

From: gmail.com [mailto: gmail.com] **On Behalf Of** James Hansen
Sent: Wednesday, August 29, 2007 8:48 AM
To: rruedy@giss.nasa.gov
Cc: Rice, Doyle; Makiko Sato; James.E.Hansen@nasa.gov; Reto Ruedy
Subject: Re: USA temperatures - question from USA TODAY

Reto, thanks, good points. Jim

On 8/29/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
Jim,

You could mention one other difference:

NCDC's curve is based exclusively on the 1221 closely examined and carefully corrected USHCN full data records, GISS's curve was culled from our GLOBAL analysis, i.e. from global maps produced by combining all available station records; this includes the part of the USHCN data that could be downloaded from USHCN's web site (ending currently with year 2005), but it also uses the remaining 541 US stations, and as far as the US mean is concerned, it is also impacted by the non-US stations located within 1200 km of the US border.

Reto

On Wed, 2007-08-29 at 03:41 -0400, James Hansen wrote:
> Doyle,
>
> We start from NCDC raw data, but the analysis method differs, as
> described in our 2001 paper. As you can discern from that paper, the
> factor that probably makes the difference regarding our relative
> rankings of 1934 and 1998 is the method of correcting for urban

> warming effects, ours yielding a somewhat larger correction. However,
> the end results are in very good agreement, as you can see by looking
> at the temperature curves.
>
> Makiko, would you please make available your recent figure with global
> and U.S. temperature curves? Doyle, you will see that these years are
> practically indistinguishable. There is no way for anyone to be
> certain which year was warmer.
>
> Jim
>
>
> On 8/28/07, Rice, Doyle < drice@usatoday.com> wrote:
> Dr. Hansen
>
>
>
> We're trying to clarify some points about the US historical
> temperature record.... Does NASA use a different data set from
> NCDC? With the recent controversy, we want to be sure we're
> not comparing apples to oranges as we cover this.
>
>
>
> According to NCDC, 2006 was the second-warmest after 1998-
>
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
>
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html
>
>
>
> But I see in theNASA data, with the recent correction, 1934
> is the warmest, with 1998 second followed by 1921 and 2006.
>
> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
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> Thanks,
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>
> Doyle Rice
>
> Weather Editor
>

> USA TODAY
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>
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: USA temperatures - question from USA TODAY
From: "Rice, Doyle" <drice@usatoday.com>
Date: Thu, 30 Aug 2007 16:16:40 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Jim - Thanks for these points of clarification. This will be helpful as my colleagues and I write and edit climate stories for USA TODAY.

I'll be sure to call or email you if I have further questions about this data.

Doyle Rice

From: gmail.com [mailto: gmail.com] **On Behalf Of** James Hansen
Sent: Wednesday, August 29, 2007 4:12 PM
To: Rice, Doyle
Cc: Makiko Sato; Reto Ruedy; James Hansen
Subject: Re: USA temperatures - question from USA TODAY

Well, I guess that I would say it a bit differently.

Our method of analysis has features that are different than the analyses of the other groups. In some cases the differences have a substantial impact.

For example, we extrapolate station measurements as much as 1200 km. This allows us to include results for the full Arctic. In 2005 this turned out to be important, as the Arctic had a large positive temperature anomaly. We thus found 2005 to be the warmest year in the record, while the British did not and initially NOAA also did not. Independent satellite IR measurements showed that our extrapolations of anomalies into the Arctic were conservative. I am very confident that our result was the correct one in that instance.

Also, as we show in our 2001 paper, our urban warming correction in the U.S. differs from the NOAA correction (we have a larger adjustment, which decreases recent temperatures relative to last century). I would not claim that one is superior to the other, but the different results provide one conservative measure of uncertainty. In general it has proven very useful to have more than one group do the analysis.

Also it should be noted that the different groups have cooperated in a very friendly way to try to understand different conclusions when they arise. You will see that we had co-authors from the other groups on our 2001 paper. And in general it is a bad idea to anoint any group as being THE authority. Science doesn't usually work best that way.

Jim

On 8/29/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
Doyle,

Since this is a technical question and Dr. Hansen is busy this
afternoon, I'll answer it:

No, your statement is NOT correct; to get the US means, NCDC's procedure of only using the best stations is more accurate. If that were our goal, we would proceed in the same way. Actually, whenever we report on US means in our publications, we recompute all US means using only USHCN data.

My recommendation to you is to continue using NCDC's data for the US means and Phil Jones' data for the global means. Our method is geared to getting the global mean and large regional means correctly enough to assess our model results.

We are basically a modeling group and were forced into rudimentary analysis of global observed data in the 70's and early 80's since nobody else was doing that job at the time. Now we happily combine NCDC's and Hadley Center's data to get what we need to evaluate our model results. For that purpose, what we do is more than accurate enough. But we have no intention to compete with either of the other two organizations in what they do best.

Sincerely,

Reto

On Wed, 2007-08-29 at 12:36 -0400, Rice, Doyle wrote:
> Jim
>
> Thank you for sending this clarification. I also received the graphs
> from Makiko.
>
>
>
> So is it correct to say that NASA's data is more accurate than NCDC's
> since it has more sources? In the media, it would be ideal to refer
> to one source rather than two. Traditionally we've used NCDC's data.
>
>
>
> And globally, we usually use the Hadley Centre data...
>
> http://www.cru.uea.ac.uk/cru/info/warming/
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> Doyle Rice
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> _____
> From @gmail.com [mailto _ _ _____ @gmail.com] On Behalf
> Of James Hansen
> Sent: Wednesday, August 29, 2007 8:48 AM
> To: rruedy@giss.nasa.gov
> Cc: Rice, Doyle; Makiko Sato; James.E.Hansen@nasa.gov; Reto Ruedy
> Subject: Re: USA temperatures - question from USA TODAY
>
>
>
>
> Reto, thanks, good points. Jim
>
> On 8/29/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>
> Jim,
>
> You could mention one other difference:
>
> NCDC's curve is based exclusively on the 1221 closely examined and
> carefully corrected USHCN full data records, GISS's curve was culled
> from our GLOBAL analysis, i.e. from global maps produced by combining
> all available station records; this includes the part of the USHCN
> data
> that could be downloaded from USHCN's web site (ending currently with
> year 2005), but it also uses the remaining 541 US stations, and as far
> as the US mean is concerned, it is also impacted by the non-US
> stations
> located within 1200 km of the US border.
>
> Reto
>
> On Wed, 2007-08-29 at 03:41 -0400, James Hansen wrote:
> > Doyle,
> >
> > We start from NCDC raw data, but the analysis method differs, as
> > described in our 2001 paper. As you can discern from that paper,
> the
> > factor that probably makes the difference regarding our relative
> > rankings of 1934 and 1998 is the method of correcting for urban
> > warming effects, ours yielding a somewhat larger
> correction. However,
> > the end results are in very good agreement, as you can see by
> looking
> > at the temperature curves.

> >
> > Makiko, would you please make available your recent figure with
> global
> > and U.S. temperature curves? Doyle, you will see that these years
> are
> > practically indistinguishable. There is no way for anyone to be
> > certain which year was warmer.
> >
> > Jim
> >
> >
> > On 8/28/07, Rice, Doyle < drice@usatoday.com> wrote:
> > Dr. Hansen
> >
> >
> >
> > We're trying to clarify some points about the US historical
> > temperature record.... Does NASA use a different data set
> from
> > NCDC? With the recent controversy, we want to be sure we're
> > not comparing apples to oranges as we cover this.
> >
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> >
> > According to NCDC, 2006 was the second-warmest after 1998-
> >
> >
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
> >
> >
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html
> >
> >
> >
> > But I see in theNASA data, with the recent correction, 1934
> > is the warmest, with 1998 second followed by 1921 and 2006.
> >
> > http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
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> >
> > Thanks,
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> >
> >
> > Doyle Rice
> >

> > Weather Editor
> >
> > USA TODAY
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> --
> Reto Ruedy < rruedy@giss.nasa.gov>
>
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>
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: source code
From: .berkeley.edu>
Date: Mon, 10 Sep 2007 09:55:55 -0700
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Dear Dr. Hansen, Dr. Ruedy and Dr. Sato,

I want to express my appreciation for your making available the source code for your surface temperature data analysis. Thank you very much your time and effort last week in compiling and annotating the computer programs.

Best regards,

UC Berkeley (graduate student)
berkeley.edu

Subject: Re: source code
From: @gmail.com>
Date: Tue, 4 Sep 2007 21:42:02 -0700
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Dear Dr. Hansen,

Thank you very much for your quick reply. I look forward to seeing the code.

As it happens, I frequently use Python (in particular, the SciPy and Numeric Python packages) in my own data analysis projects. I think it is one of the best available programming environments for data processing, and I would heartily recommend it. Much of it is very similar to Matlab, which you may be more familiar with.

Best regards,

On 9/4/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> You are welcome to have a copy of our computer code. Depending upon your programming background, there is a possible small complication in that parts of the computer program as it is used were written by a person (Jay Glascoe) who left several years ago in a code (Python) that is obscure to most of us (perhaps all of us at GISS). Reto Ruedy is in the process of rewriting that part in Fortran, as we know the function of it; and the Python and Fortran codes should give the same results. In the interim, we will release the codes as they have been used (including Jay's Python subroutines). The procedure to access the codes will be described in my next e-mail, which I will send this week.
>
> Jim Hansen
>
> (By the way, Reto also notes that the codes are a collection that accumulated over 25 years. Actually, I started with an NYU undergraduate student in the 1970s, but Sergej Lededeff replaced most of that code in the early 1980s. Reto says that he intends to simplify/combine steps in the code, but it may be several weeks before he can do that.)
>
> On 9/4/07, @socrates.berkeley.edu> wrote:
>
> > Dear Dr. Hansen,
> >
> > My name is and I am a graduate student in physics at UC Berkeley. I am writing to request the complete computer program source code you and your coauthors used to adjust and analyze the surface temperature data in the following paper:
> >
> > Hansen, J., Mki. Sato, R. Ruedy, K. Lo, D.W. Lea, and M. Medina-Elizade 2006. Global temperature change. Proc. Natl. Acad. Sci. 103, 14288-14293, http://www.pnas.org/cgi/content/abstract/103/39/14288
> >
> > I and others would like to understand all details of your analysis of global temperature trends. I am making this request for source code consistent with the PNAS policy copied below.
> >
> > Thank you very much in advance.

Sincerely,

berkeley.edu

PNAS policy from
http://www.pnas.org/misc/iforc.shtml#policies

(viii) Materials and Data Availability. To allow others to replicate and build on work published in PNAS, authors must make materials, data, and associated protocols available to readers. Authors must disclose upon submission of the manuscript any restrictions on the availability of materials or information.

Authors must make Unique Materials (e.g., cloned DNAs; antibodies; bacterial, animal, or plant cells; viruses; and computer programs) promptly available on request by qualified researchers for their own use. Failure to comply will preclude future publication in the journal. It is reasonable for authors to charge a modest amount to cover the cost of preparing and shipping the requested material. Contact pnas@nas.edu if you have difficulty obtaining materials.

Subject: GISS data update
From: "Andrew Elek" @sympatico.ca>
Date: Sat, 18 Aug 2007 20:40:56 -0400
To: <James.E.Hansen@nasa.gov>

I am doing some research using the GISS data. Has the Table on global anomalies (based on met.station data) been recently updated in response to Mr. McIntyre's comments? I know that the US data have been updated for the most recent ten years.

Thanks

Andrew Elek

Andrew Elek
Management Consultant
Toronto

e-mail(home): @sympatico.ca

Subject: Re: Peak Oil and Global Temperature 1940's to 1980'
From: @comcast.net
Date: Sat, 08 Sep 2007 14:20:37 +0000
To: James Hansen <jhansen@giss.nasa.gov>

Do you have any explanations for the apparent global temperature drop from about 1940 to about 1980?

--
Regards,

---------- Original message ----------
From: James Hansen <jhansen@giss.nasa.gov>

> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as
> subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf
>

Subject: Re: Peak Oil and Global Temperature
From: @comcast.net
Date: Sat, 08 Sep 2007 14:38:24 +0000
To: James Hansen <jhansen@giss.nasa.gov>

Any idea what the "average height above ground" is for the temp reporting stations that feed raw temp data to your models?

Any idea of "concrete/man-made surface mass" increase or decrease in and around temp reporting stations over the last 30 years?

--
Regards,

> ---------- Original message ----------
> From: James Hansen <jhansen@giss.nasa.gov>
>
> > To be removed from Jim Hansen's e-mail distribution respond with REMOVE as
> > subject
> >
> > http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf
> >

Subject: RE: Fwd: <no subject>
From: "Farrell, Kelly J. (GSFC-100.0)" <Kelly.J.Farrell@nasa.gov>
Date: Fri, 31 Aug 2007 12:23:58 -0500
To: "James Hansen" <jhansen@giss.nasa.gov>, "Einaudi, Franco \(GSFC-610.0\)" <franco.einaudi-1@nasa.gov>
CC: "JackKaye" <jkaye@hq.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Larry Travis" <ltravis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Thanks so much!

From: gmail.com [mailto: gmail.com] **On Behalf Of** James Hansen
Sent: Friday, August 31, 2007 1:22 PM
To: Farrell, Kelly J. (GSFC-100.0); Einaudi, Franco (GSFC-610.0)
Cc: JackKaye; Leslie McCarthy; Darnell Cain; Larry Travis; Reto Ruedy; Makiko Sato
Subject: Fwd: Fwd: <no subject>

Here I forward the messages to two additional people.
Jim
(and add Larry Travis to cc)

---------- Forwarded message ----------
From: **James Hansen** <jhansen@giss.nasa.gov >
Date: Aug 31, 2007 12:01 PM
Subject: Fwd: Fwd: <no subject>
To: Darnell Cain <dcain@giss.nasa.gov>, Leslie McCarthy < lnolan@giss.nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato < makis@giss.nasa.gov>

The only additional minor comment from Reto/Makiko is one sentence, as indicated below. Jim

---------- Forwarded message ----------
From: **Reto Ruedy** < rruedy@giss.nasa.gov>
Date: Aug 31, 2007 10:42 AM
Subject: Re: Fwd: <no subject>
To: James Hansen < jhansen@giss.nasa.gov >
Cc: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy < cdrar@giss.nasa.gov>

Jim,

The only factual inaccuracy is the years affected by the discontinuity:
So I would change Jack's sentence that starts with:

"The flaw affected only ..."

I would replace the end "and only after 2000" by "and only for years 2000-present"

or something like that.

Reto

On Fri, 2007-08-31 at 10:05 -0500, James Hansen wrote:
> Sorry, I think that you were not on the distribution. Jim
>
> ---------- Forwarded message ----------
> From: James Hansen < jhansen@giss.nasa.gov>
> Date: Aug 26, 2007 7:15 PM
> Subject: Re: <no subject>
> To: Jack Kaye < jack.a.kaye@nasa.gov>
> Cc: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov >,
> Leslie McCarthy < lnolan@giss.nasa.gov>, "Freilich, Michael H.
> (HQ-DK000)" < michael.h.freilich@nasa.gov>, Ellen Cohen
> < ellen.cohen-1@nasa.gov>
>
> Hi Jack,
>
> Just back It seems to me that the paragraph is basically
> o.k., but I would like Reto and Makiko to verify that.
>
> The "ranking" of individual years is something that we try to
> discourage media from pursuing, especially for an area the size of
> contiguous U.S. (2% of globe). There are too many years that are
> statistically indistinguishable.
>
> Also, the results change as new stations are added to the record or
> old ones are changed/corrected. Indeed, WMO and/or NOAA add
> previously unreported data every month and often correct errors or
> make adjustments to some data from prior months. In general each
> month the data set that we obtain differs (slightly) in the past, as
> well as having the addition of another month. So it is like an
> election in which you continually have recounts and absentee ballots
> added. In the case of an election, change of order makes a
> difference, as you have to have a winner. But in the temperature
> analysis, in the case of razor thin differences, these flips have no
> physical significance (only an impact is when an eagle-eyed contrarian
> finds something that can be used as fodder for whatever ends they
> have).
>
> Jim
>
>
> On 8/23/07, Jack Kaye < jack.a.kaye@nasa.gov > wrote:
> Jim – in attempting to close the loop on this so we can deal
> with the legislative action, I wanted to see if we could come
> up with any more quantitative information. I looked at the

> longer text that you had the link to ("The Real Deal: Usufruct
> & the Gorilla).
>
> First, it appears that the "XX July 2007" in your message
> below should be 7 August 2007.
>
> In terms of 1934 vis a vis the more recent years, the key data
> I see from your text that may be worth citing are:
>
> • The four warmest US years on record were 1921, 1934, 1998,
> and 2006
> • The mean temperature anomaly in the US was 1.25 deg C in
> 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree
> difference between the two, which is smaller than the
> uncertainty in the actual numbers.
> • In 1934 the US was warm relative to much of the rest of the
> word, while in 2006 the world was much warmer.
>
> If these points are enough, we can try to get them into a
> short paragraph. How about this?
>
> The computer program used by Dr. Hansen to create the
> temperature record is rerun every month as new meteorological
> station data and new satellite sea surface temperature data
> are reported. The program produces a global surface
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> On 8/13/07, Donald Anderson
> <donald.anderson-1@nasa.gov
> <mailto:donald.anderson-1@nasa.gov> > wrote:
> Jim:
> FYI
> Any comment?
> Don
>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and
> Prediction (MAP)
> Earth Science Division
> Science Mission
> Directorate
> NASA HQ
> Washington, DC,
> 20546-0001
> 202-358-1432 Fax:
> x2770
> email:
> Donald.Anderson-1@nasa.gov <mailto:Donald.Anderson-1@nasa.gov>
>
>
> ------ Forwarded
> Message
> From: "Volz, Stephen
> M. (HQ-DK000)" <
> svolz@nasa.gov
> <mailto:svolz@nasa.gov> >
> Date: Mon, 13 Aug 2007
> 12:01:06 -0400
> To: "Anderson, Donald
> (HQ-DK000)" <
> donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >,
"Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
> Cc: "Kaye, Jack A.
> (HQ-DK000)" <
> jack.a.kaye@nasa.gov
> <mailto:jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)"

< dwayne.c.brown@nasa.gov>
> Conversation: <no subject>
> Subject: <no subject>
>
> Don et al.,
>
> I saw this on the NASA news summary today.
>
> Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48

Subject: RE: Fwd: <no subject>
From: "Farrell, Kelly J. (GSFC-100.0)" <Kelly.J.Farrell@nasa.gov>
Date: Fri, 31 Aug 2007 12:23:58 -0500
To: "James Hansen" <jhansen@giss.nasa.gov>, "Einaudi, Franco \(GSFC-610.0\)" <franco.einaudi-1@nasa.gov>
CC: "JackKaye" <jkaye@hq.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Larry Travis" <ltravis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Thanks so much!

From: gmail.com [mailto: gmail.com] **On Behalf Of** James Hansen
Sent: Friday, August 31, 2007 1:22 PM
To: Farrell, Kelly J. (GSFC-100.0); Einaudi, Franco (GSFC-610.0)
Cc: JackKaye; Leslie McCarthy; Darnell Cain; Larry Travis; Reto Ruedy; Makiko Sato
Subject: Fwd: Fwd: <no subject>

Here I forward the messages to two additional people.
Jim
(and add Larry Travis to cc)

--------- Forwarded message ---------
From: **James Hansen** <jhansen@giss.nasa.gov >
Date: Aug 31, 2007 12:01 PM
Subject: Fwd: Fwd: <no subject>
To: Darnell Cain <dcain@giss.nasa.gov>, Leslie McCarthy < lnolan@giss.nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato < makis@giss.nasa.gov>

The only additional minor comment from Reto/Makiko is one sentence, as indicated below. Jim

--------- Forwarded message ---------
From: **Reto Ruedy** < rruedy@giss.nasa.gov>
Date: Aug 31, 2007 10:42 AM
Subject: Re: Fwd: <no subject>
To: James Hansen < jhansen@giss.nasa.gov >
Cc: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy < cdrar@giss.nasa.gov>

Jim,

The only factual inaccuracy is the years affected by the discontinuity:
So I would change Jack's sentence that starts with:

"The flaw affected only ..."

I would replace the end "and only after 2000" by "and only for years 2000-present"

or something like that.

Reto

On Fri, 2007-08-31 at 10:05 -0500, James Hansen wrote:
> Sorry, I think that you were not on the distribution. Jim
>
> ---------- Forwarded message ----------
> From: James Hansen < jhansen@giss.nasa.gov>
> Date: Aug 26, 2007 7:15 PM
> Subject: Re: <no subject>
> To: Jack Kaye < jack.a.kaye@nasa.gov>
> Cc: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov >,
> Leslie McCarthy < lnolan@giss.nasa.gov>, "Freilich, Michael H.
> (HQ-DK000)" < michael.h.freilich@nasa.gov>, Ellen Cohen
> < ellen.cohen-1@nasa.gov>
>
> Hi Jack,
>
> Just back It seems to me that the paragraph is basically
> o.k., but I would like Reto and Makiko to verify that.
>
> The "ranking" of individual years is something that we try to
> discourage media from pursuing, especially for an area the size of
> contiguous U.S. (2% of globe). There are too many years that are
> statistically indistinguishable.
>
> Also, the results change as new stations are added to the record or
> old ones are changed/corrected. Indeed, WMO and/or NOAA add
> previously unreported data every month and often correct errors or
> make adjustments to some data from prior months. In general each
> month the data set that we obtain differs (slightly) in the past, as
> well as having the addition of another month. So it is like an
> election in which you continually have recounts and absentee ballots
> added. In the case of an election, change of order makes a
> difference, as you have to have a winner. But in the temperature
> analysis, in the case of razor thin differences, these flips have no
> physical significance (only an impact is when an eagle-eyed contrarian
> finds something that can be used as fodder for whatever ends they
> have).
>
> Jim
>
>
> On 8/23/07, Jack Kaye < jack.a.kaye@nasa.gov > wrote:
> Jim – in attempting to close the loop on this so we can deal
> with the legislative action, I wanted to see if we could come
> up with any more quantitative information. I looked at the

> longer text that you had the link to ("The Real Deal: Usufruct
> & the Gorilla).
>
> First, it appears that the "XX July 2007" in your message
> below should be 7 August 2007.
>
> In terms of 1934 vis a vis the more recent years, the key data
> I see from your text that may be worth citing are:
>
> • The four warmest US years on record were 1921, 1934, 1998,
> and 2006
> • The mean temperature anomaly in the US was 1.25 deg C in
> 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree
> difference between the two, which is smaller than the
> uncertainty in the actual numbers.
> • In 1934 the US was warm relative to much of the rest of the
> word, while in 2006 the world was much warmer.
>
> If these points are enough, we can try to get them into a
> short paragraph. How about this?
>
> The computer program used by Dr. Hansen to create the
> temperature record is rerun every month as new meteorological
> station data and new satellite sea surface temperature data
> are reported. The program produces a global surface
> temperature field using an analysis scheme documented by
> Hansen in a peer-reviewed publication from 2001. The flaw
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> < donald.anderson-1@nasa.gov
> <mailto: donald.anderson-1@nasa.gov > > wrote:
> Jim:
> FYI
> Any comment?
> Don
>
>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and
> Prediction (MAP)
> Earth Science Division
> Science Mission
> Directorate
> NASA HQ
> Washington, DC,
> 20546-0001
> 202-358-1432 Fax:
> x2770
> email:
> Donald.Anderson-1@nasa.gov <mailto: Donald.Anderson-1@nasa.gov>
>
>
> ------ Forwarded
> Message
> From: "Volz, Stephen
> M. (HQ-DK000)" <
> svolz@nasa.gov
> <mailto: svolz@nasa.gov> >
> Date: Mon, 13 Aug 2007
> 12:01:06 -0400
> To: "Anderson, Donald
> (HQ-DK000)" <
> donald.anderson-1@nasa.gov <mailto: donald.anderson-1@nasa.gov> >,
"Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto: hal.maring@nasa.gov> >
> Cc: "Kaye, Jack A.
> (HQ-DK000)" <
> jack.a.kaye@nasa.gov
> <mailto: jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)"

< dwayne.c.brown@nasa.gov>
> Conversation: <no
> subject>
> Subject: <no subject>
>
> Don et al.,
>
> I saw this on the NASA
> news summary today.
>
> Columnist
> Notes Changes
> In NASA's
> Temperature
> Data. In an
> op-ed for the
> Washington
> Times (8/13,
> 87K) Mark
> Steyn, a
> syndicated
> columnist who
> is also senior
> contributing
> editor for
> Hollinger Inc.
> Publications,
> senior North
> American
> columnist for
> Britain's
> Telegraph
> Group, North
> American
> editor for the
> Spectator,
> writes, "
> Something
> rather odd
> happened the
> other day. If
> you go to
> NASA's Web
> site and look
> at the " U.S.
> surface air
> temperature"
> rankings for
> the Lower 48

> states, you
> might notice
> something has
> changed.
>
> Then again,
> you might not.
> They're not
> issuing any
> press releases
> about it. But
> they have
> quietly
> revised their
> All-Time Hit
> Parade for
> U.S.
> temperatures.
>
> The "hottest
> year on
> record" is no
> longer 1998,
> but 1934.
> Another
> alleged
> swelterer, the
> year 2001, has
> now dropped
> out of the Top
> 10 altogether,
> and most of
> the rest of
> the 21st
> century —
> 2000, 2002,
> 2003, 2004 —
> plummeted even
> lower down the
> Hot 100. In
> fact, every
> supposedly hot
> year from the
> '90s and
> Oughts has had
> its
> temperature
> rating
> reduced. Four

> of America's
> Top 10 hottest
> years turn out
> to be from the
> 1930s, that
> notorious
> decade when we
> all drove
> around in huge
> SUVs with the
> air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.
>
> So why is 1998
> no longer
> America's
> record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/> <http://climateaudit.com/> labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "d

...

[Message clipped]

Subject: RE: A Light On Upstairs? Invitation from a friend
From: @fairmontstate.edu>
Date: Tue, 11 Sep 2007 22:21:23 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Dr. Hanson,

You were very kind to take the time to answer my questions about the global warming model. In turn I would like to extend a hand of friendship and invite you to come to Des Moines Iowa on October 21st. We're putting together a rally and concert to encourage Al Gore to enter the presidential race because we believe there is no better leader out there and we need him. Many grass roots and "netroots" groups from across the country have come together to make this effort a reality. We would be honored if you would participate.

The event will be held at the Hoyt Sherman Center, a venue that includes a theater that seats around 1200 people. We are actively recruiting others to participate and will be publicizing the event widely next week. Among others, the event will showcase a young inventor, Chris Olsen, and his wave energy converter to demonstrate high-yield, low cost solutions to the global warming crisis.

Please take a moment to visit the virtual center where the rally and concert will be held:

http://www.hoytsherman.org/virtual.html

Please say you'll come to our "Run, Al, Run" rally and concert.

From: gmail.com on behalf of James Hansen
Sent: Sat 8/11/2007 5:25 AM
To:
Subject: Fwd: A Light On Upstairs?

Your e-mail should be framed, as a counterweight to the all the viscous ad hominem e-mails that have descended through the ethernet.

The answer to your first question is in the attachment. You will see that the flaw in the analysis was of a sort that might occasionally happen, without being detected for a while because the effect is so small. (The large effect claimed in some of the hate-mails was apparently due to some people confusing conclusions about which year was warmest in the United States and which year was warmest on the global average.)

The answer to your second question is that this matter has no effect whatever on climate models or the interpretation of results from climate models, as you can infer yourself once you have looked at the response to your first question.

Jim Hansen

From:

To:
Cc:
Subject: Changes to SAT measurements tracking down the truth for a change

Dr. Hansen,

I am a student at Fairmont State University. Today FOX news reported that a change in temperature modeling by GISS seriously undermines global warming claims. Rather than duke it out in the

Could you please answer two questions for me. First, in layman-dummy talk, what were the recent changes, and second, what does it mean for global climate modeling, especially global warming

Thank you in advance for your kind patience and reasoned response.

From: @charter.net]
Sent: Thursday, September 27, 2007 8:30 AM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Subject: Missing station data

Dear Dr. Ruedy,

I wanted to bring the following to your attention.

The individual records for station ID 22220674000 (there are seven of them) are available from the GISS website, but the combined record for the same station is absent.

The individual and combined records for station ID 63826063001 are not available from the GISS website today, but were available three days ago.

Kind regards,

From: @charter.net]
Sent: Thursday, September 27, 2007 9:15 AM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Subject: Re: Missing station data

Dear Dr. Reudy,

Thanks for responding. That kind of thing happens to the best of us! I will check the site later today.

Regards,

Reto Ruedy wrote:
> Dear
>
> Thanks for notifying me about that problem. I verified that something
> is off.
>
> We have not made any changes since Sep. 11; unfortunately, trying to
> fix the problem this morning, I managed to erase some vital data sets.
> We may have to wait for our web master to come in to fix the problem.
>
> Hopefully that can be done sometime today.
>
> Sorry for the inconvenience,
>
> Reto A Ruedy
>
> On Thu, 2007-09-27 at 08:29 -0400, wrote:
>
>> Dear Dr. Ruedy,
>>
>> I wanted to bring the following to your attention.
>>
>> The individual records for station ID 22220674000 (there are seven of
>> them) are available from the GISS website, but the combined record
>> for the same station is absent.
>>
>> The individual and combined records for station ID 63826063001 are
>> not available from the GISS website today, but were available three days ago.
>>
>> Kind regards,
>>
>> .
>> :
>> I
>>
>>

From: @charter.net]
Sent: Thursday, September 27, 2007 11:09 AM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Subject: Re: Missing station data

Dear Dr. Reudy,

I see what you mean. It is likely that my previous attempt the read the file (via a program) failed but that I did not catch the error in the log. At the time, the program would write a seemingly valid summary, which is why I thought I had a successful read previously. I thought I had caught all of those, but apparently I did not. I have since corrected the program's behavior.

Thank you,

Reto Ruedy wrote:

Dear Mr.

Ostrov Dikson (22220674000) seems to work fine again.

However, I can't believe that you ever could display Kronstadt (63826063001) since the only data GHCN has for that station are from 1844-1875 - and we only use data starting in 1880. Do you remember the name of the station that you displayed ?

Reto A Ruedy

On Thu, 2007-09-27 at 08:29 -0400, wrote:

> Dear Dr. Ruedy,
>
> I wanted to bring the following to your attention.
>
> The individual records for station ID 22220674000 (there are seven of them) are available from the GISS website, but the combined record for the same station is absent.
>
> The individual and combined records for station ID 63826063001 are not available from the GISS website today, but were available three days ago.
>
> Kind regards,

From: @charter.net]
Sent: Saturday, September 29, 2007 12:31 PM
To: Hansen, James E. (GISS-6110)
Cc: Hansen, James E. (GISS-6110); Reto Ruedy
Subject: Re: Preliminary examination of HL87 bias method as applied to individual station records

Dear Dr. Hansen,

I agree - my first impression is that impact to absolute temperature appears to be small, as is seen in the plot I sent. What I have not tried to look at yet is how it affects the anomaly and resulting trend line. I noticed that the period 1951 to 1980 has a relatively large negative bias, which I found surprising. When I first started thinking about this from a pure mathematical sense I was expecting the largest bias to be in the earliest years and decreasing as it approached 1991. To find the reverse to be true was a surprise.

I think two things are at play in producing the results I found. One is certainly the order records are combined. I have found many examples where a simple swap in records has a big impact on bias across multiple records. In fact, the original implementation used to emulate the algorithm had a bug that improperly ordered records when no MCDW record existed. The plot I produced showed a slight positive bias overall!

The second thing that comes into play is the estimation of missing quarterly and annual values. The overlap period between the MCDW and other records is almost always four years, sometimes five. The first annual average in an MCDW record is always an estimate, because the previous year's December temperature is not available. I have found multiple cases where the monthly averages between an MCDW record and another record are identical, but the estimated first annual average for MCDW differs from the measured average in the other record. Because of the short overlap period, this estimate has significant influence on the bias magnitude applied to the other record.

This is why, in part, I suggested that estimation be done after records are combined rather than before, because the estimation process influences the combination process. I also think that the greater number of data points one gets by measuring overlap at the monthly level rather than annual level yields a more robust combined record.

Regards,

James Hansen wrote:
Hi

Thanks for the comments and suggestions. I spoke briefly with Reto. He has looked into the routine written by Jay Glascoe to combine records, and although its a language he is not familiar with, he says that he can at least make the simple changes needed to test the ordering of stations. Since we tested the ordering of stations in the main part of the program (we are not sure whether Jay rechecked that), we doubt that it would make a noticeable difference, but will let you know.

We didn't have time to discuss the other things yet. But I note that tests in the past have shown such choices to have small impact.

Regards, Jim Hansen

On 9/27/07, @charter.net> wrote:
Dear Dr. Hansen,

I understand you are extremely busy, but I wanted to pass along some analysis I have been doing on your method of combining individual temperature records for a single station using the "bias method", as described primarily in HL87.

My preliminary analysis of the method seems to show that it introduces an "artificial cooling" to station records before 1987. This cooling seems to be introduced primarily as a result of two things: the order selected for combining records and the fact that annual and quarterly temperatures are estimated prior to combining those records.

In HL87 you acknowledge: "One potential disadvantage of the method we have described for combining station records is that the results, in principle, depend on the ordering of the station records." However, the discussion that ensues is around different stations rather than different records for the same station. I am finding that, when using this method to combine records from a single station, the ordering of records has far more influence than expected.

The descriptions I have seen for ordering stations in your papers indicate that they are ordered from greatest number of years of temperature record to the least number of years. In practice what I find is that if an MCDW (Monthly Climatic Data for the World) record exists, it is used first, even though it is usually the shortest record (when it exists. it also the latest record for a station). Because it is the first record in the order, it is never biased, but all others preceding it chronologically are biased. The overlap period with preceding records seems to be somewhat short - usually four years, sometimes five. Although HL87 discusses the combination of stations within a gridcell, the implication is that the same methodology is used for combining station records. This would mean the minimum overlap period should be 20 years.

In reading HL87 I would have expected the period of overlap to be calculated using the months of overlap, which represents the finest grain of measurement in the record GISS uses. Instead, I have determined that the annual record is used, which is the coarsest grain of measurement in the record used by GISS. If the monthly records were complete, this would not be an issue. In practice I find that they are usually not complete, so an estimated annual average is often used when determining overlap periods. In fact, the first year in a record is almost always an estimate. This is because the records begin in January, but the average is calculated from December to November. Thus, the "missing" December value must be estimated. The process of estimating annual averages prior to combining individual records for a station is not one that I have found documented thus far.

As chance would have it, the process of combining records using MCDW records first, the short overlap period between MCDW records and previous records, and the fact that many annual averages are estimated, seems to yield a clear cooling bias to pre-1991 temperature records. An example can be seen here with the Russian records.

While I understand the rationale behind using the bias method to combine station records within a grid cell, I don't fully understand why it is used to combine separate records for an individual station. As you note in your 1999 paper "in the majority of cases the overlapping portions of the two records are identical, representing the same measurements that have made their way into more than one data set." This indicates that a simple average

of the records is appropriate.

Why is the bias method better than the following?:
- For each station examine all monthly records for the station simultaneously
- If no valid measurement exists in any record for a given month, record NA (or equivalent)
- If exactly one valid measurement exists for a given month, use that value
- If more than one valid measurement exists for a given month, use the average of all valid measurements

After all records have been combined in this manner, estimate missing annual values where possible.

I appreciate your thoughts on this.

From: @charter.net]
Sent: Thursday, October 04, 2007 9:00 AM
To: Reto Ruedy
Subject: Station ID 62103970000

Good morning Dr. Reudy,

My program choked when I tried to process the data for record 6 of station 62103970000 (the last of seven records for the station). When I looked at the record on GISS I noticed the entire record is as follows:

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	D-J-F	M-A-M	J-J-A	S-O-N	ANN
1993	999.9	999.9	999.9	999.9	999.9	999.9	14.0	13.4	11.6	7.5	5.8	999.9	999.9	999.9	13.7	8.3	999.90
1994	5.0	4.2	6.8	999.9	10.1	999.9	14.6	999.9	999.9	999.9	999.9	999.9	4.6	8.5	999.9	999.9	999.90

The question I had was, since there is very little data in this record and no annual average can be estimated, is this a useful record?

(This is a harmless question - I am just curious)

Thanks,

From: @charter.net]
Sent: Thursday, October 04, 2007 4:45 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Subject: Re: Station ID 62103970000

Dear Dr. Ruedy,

Thank you for explaining what happens with the Claremorris MCDW record after step 1. Dropping it makes sense.

In my previous email to Dr. Hansen I think I over-emphasized the ordering used to combine records and thus masked what I believe is really at the heart of the matter. That is, identifying records that are variations of each other and then properly combining them. By "properly combining" I mean to suggest the use of one or more algorithms that are not dependent on station order (the ideal algorithm is mathematically commutative).

Also, I think that any combining method should work at the monthly level rather than the annual level. The overlap period between two records is often very short, and the use of annual averages provides poor granularity for applying a combining algorithm. Plus, the annual averages are very often estimated, as I noted in my previous email, and I think that exposes the combining method to using corrupt data. In fact, the bias method seems particularly sensitive to the use of estimated annual averages. Using monthly data as input should lessen that exposure.

I have not done a thorough analysis of all Russian records but I have noticed in spot-checks that many records are identical or near-identical during the period of overlap. Dr. Hansen makes mention of this observation in HL87. If they differ it is often by 0.1 or 0.2 degrees. In the case of such records I intuitively think that the proper method for combining the records is to average them month by month. When a monthly value exists in one record but not the other, use the existing value. When a monthly value does not exist in either record, it should not exist in the combined record. Annual averaging can be done after all records are combined. This approach would be mathematically commutative and does not depend on estimating missing values. I think most, if not all, records with short overlap intervals can be combined in this manner.

Longer records can be more complicated. I have noticed time periods within longer overlap periods that are identical or near identical. Thus, for those time periods I would combine the data as described above. Other time periods may require some form of adjustment prior to combining, but I do not presently have a sound suggestion as to how that should be done. I have seen odd patterns of differences between some records that defy a suggested method of combining them. For example, Bratsk record 0 and record 1 overlap from 1951 through 1990. Looking at the period from 1951 to 1965, I see an interesting pattern of differences on a month-by-month basis. Subtracting record 0 from record 1, I see that most (not all) differences are as follows:

Jan - 0
Feb - 0
Mar - -0.2
Apr - 0
May - +0.2
Jun - +0.3
Jul - +0.2
Aug - +0.1
Sep - -0.1

Oct - 0
Nov - 0.1
Dec - 0.1

Perhaps, at the end of the day, the different records for a single station should simply be averaged during the period of overlap as described above, since the assumption is that they are co-located?

Kind regards,

Reto Ruedy wrote:
Good morning

In our procedure, the MCDW record of Claremorris (Ireland) survived (barely) step 1 as an individual series, since it was too short to be combined with the other sources.

It got dropped at the beginning of step 2 together with all records that did not contain at least 20 years of data.

For our purpose, this record had no use. More generally, records shorter than 4 years are not used by our procedure; if it helps to keep your program from crashing, you may as well disregard them right away.

By the way, I did carry out the analysis combining sources in the order of their length (rather than starting with MCDW). It caused a slight but insignificant increase in the temperature trend. The individual global annual means were affected by -0.003C (1910-1920) to +0.005C (1995-present), whereas the margin of error is of the order of magnitude of 0.1 C.

When Dr. Hansen comes back from travel, he will decide how much of this analysis will be put on the web.

As you see from your own mail, all GHCN data are rounded to the nearest tenth of a degree. So there is no point worrying about procedural modifications that affect station data anomalies by less than .1C . At the end of step 1 and step 2, we again round the data to the nearest tenth of a degree.

At the beginning of step 3, we subtract from each time series its 1951-1980 mean, hence any vertical shifts introduced by the "bias method" in step 1 will cancel out at that point.

Thanks for your interest,

Reto A. Ruedy

On Thu, 2007-10-04 at 08:59 -0400, wrote:

> Good morning Dr. Reudy,
>
> My program choked when I tried to process the data for record 6 of station 62103970000 (the last of seven records for the station). When I looked at the record on GISS I noticed the entire record is as follows:

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
OCT	NOV	DEC	D-J-F	M-A-M	J-J-A	S-O-N	ANN		
1993	999.9	999.9	999.9	999.9	999.9	999.9	14.0	13.4	11.6
7.5	5.8	999.9	999.9	999.9	13.7	8.3	999.90		
1994	5.0	4.2	6.8	999.9	10.1	999.9	14.6	999.9	999.9
999.9	999.9	999.9	4.6	8.5	999.9	999.9	999.90		

The question I had was, since there is very little data in this record and no annual average can be estimated, is this a useful record?

(This is a harmless question - I am just curious)

Thanks,

Date: Fri, 10 Aug 2007 09:34:53 -0700
From: @shaw.ca>
Subject: GISS - Truth driven vs agenda driven
To: Leslie.M.McCarthy@nasa.gov
X-Mailer: Sun Java(tm) System Messenger Express 6.2-7.05 (built Sep 5 2006)
X-Accept-Language: en
Priority: normal

Dear Leslie,

My fellow Canadians have unveiled another Global warming scam - yours!

Now that we know Mr. Hansen used incorrect data or procedures in determining the "hottest years", concluding that the top 5 warmest yeats since the 1890s are : 2005, 1998, 2002, 2003, 2006.

Yet, there on your website (http://www.giss.nasa.gov/research/news/20070208/) is the information still making what is now known to be a bogus claim.

Yes we are at a tipping point all right. And the truth is spilling all over your pro-AGW agenda.

Just like Mr. Manns infamous Hockey Stick graph, which was proven fraudulent by the same people who found your glaring errors, another lie bites the dust. Funny thing is, when they determined Mr. Mann was fudging things, they found that Mr. Mann's "peer reviewed" work was reviewed but not put through a rigourous, truth seeking, audit. That led to them forming climateaudit.org, to apply the audits that are so obviously missing from the process. And BINGO - Mr. Hansen is unmasked as a zealot.

Now, are you honestly a scientific driven institution, or will you admit to being an agenda driven one? I await the press conference to announce that you have had to revise the hottest years list. I await the update to your website to reflect the new, peer-audited, results. I await the confession that you made a huge mistake. I await the firing of those who created and flogged this lie.

Will you do the right thing?

Sincerely

Subject: Re: Possible story about the temp record
From: David Herring <dherring@climate.gsfc.nasa.gov>
Date: Fri, 14 Sep 2007 11:45:47 -0400
To: Robert Cahalan <Robert.F.Cahalan@nasa.gov>, James Hansen <jhansen@giss.nasa.gov>
CC: Gavin Schmidt <gschmidt@giss.nasa.gov>, Franco Einaudi <franco.einaudi@nasa.gov>, rruedy@giss.nasa.gov, makis@giss.nasa.gov, lnolan@giss.nasa.gov

Dear Jim,

Bob Cahalan has asked me to travel to GISS to interview you directly so that we can produce an article for NASA's Earth Observatory about this topic, clarifying your important work in monitoring global surface temperature trends for the public.

Looking at my schedule, I can take the train to New York next week on either September 19 or 21; or the following week on either September 24, 25, or 26. Would any of those days work for you? Please advise as soon as possible so I can make travel arrangements.

I am looking forward to it.

Best regards,

David Herring

At 8:45 AM -0400 8/24/07, Robert Cahalan wrote:
> Jim,
> Please give an estimated completion date for your writeup on the temperature data adjustment, so Earth Observatory can make plans to support it.
> .Bob.
>
> On Aug 14, 2007, at 2:16 PM, James Hansen wrote:
>
> > Thanks, Bob, I am writing something -- perhaps it can be used there, or modified to be used there. Jim
> >
> > At 01:52 PM 8/14/2007, Robert Cahalan wrote:
> > > Jim,
> > > Earlier I sent the following to Gavin -- and I realize that these are points you've been repeating for many years, just want to add that EarthObservatory could be helpful to get the word out:
> > >
> > > > Yes, I agree that this could be an educational opening for mainstream media.
> > > >
> > > > My feeling is we need to lead with some of the faulty claims, and then illustrate that:
> > > > (1) the data is all freely available and widely used for scientific study;
> > > > (2) scientists use extensive statistical testing to determine whether observed differences can be ignored as being within the observational uncertainty or natural year-to-year variations;
> > > > (3) changes of a given magnitude at a station or in a limited area average like the lower 48 contiguous United States, which covers about 2% Earth's surface, are less likely to be significant than a change of similar magnitude in averages over the full surface area of the Earth, which is less affected by many local influences (mention corrections to minimize urban effects too); and
> > > > (4) changes in individual years, even ones that change the ranking of years, are less likely to be associated with sustained climate change than changes averaged over several successive years. On

this last point we might quote the CCSP temperature synthesis and assessment product 1.1, which emphasized this point.

Of course these are all basic points that any of us climatologists know, but the public needs reminding, and this brouhaha could give a good opportunity to educate any "fence-sitters" who might be listening...
.Bob.

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

Subject: Re: Possible story about the temp record
From: David Herring <dherring@climate.gsfc.nasa.gov>
Date: Fri, 14 Sep 2007 12:29:20 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>
CC: "Robert Cahalan" <Robert.F.Cahalan@nasa.gov>, "Gavin Schmidt" <gschmidt@giss.nasa.gov>, "Franco Einaudi" <franco.einaudi@nasa.gov>, rruedy@giss.nasa.gov, makis@giss.nasa.gov

Dear Jim,

Thank you for the quick response. In that case, I'll come up next Friday, September 21, for a late afternoon interview. I'm guessing I would need less than an hour of our time, but please tell me about what time you would like me to be there.

With best regards,

David

At 12:08 PM -0400 9/14/07, James Hansen wrote:

> Hi David, September 19 I am September 21 would work but I have several interviews that day that do not end until mid afternoon, so you would need to stay for a late afternoon discussion. September 25 could work, in between some other discussions, on the 24th and 26th I will not be in office
>
> Jim

> On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov> wrote:
>
> > Dear Jim,
> >
> > Bob Cahalan has asked me to travel to GISS to interview you directly so that we can produce an article for NASA's Earth Observatory about this topic, clarifying your important work in monitoring global surface temperature trends for the public.
> >
> > Looking at my schedule, I can take the train to New York next week on either September 19 or 21; or the following week on either September 24, 25, or 26. Would any of those days work for you? Please advise as soon as possible so I can make travel arrangements.
> >
> > I am looking forward to it.
> >
> > Best regards,
> >
> > David Herring

> At 8:45 AM -0400 8/24/07, Robert Cahalan wrote:
> >Jim,
> > Please give an estimated completion date for your writeup on
> >the temperature data adjustment, so Earth Observatory can make plans
> >to support it.
>
> >.Bob.
> >

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

Subject: Re: Recent events
From: Phil Jones <p.jones@uea.ac.uk>
Date: Wed, 15 Aug 2007 17:00:21 +0100
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, d.lister@uea.ac.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Jim,
We can't spare much time either. I have 10 years to go, by the way! I hope the Met Office predictions for 2015 in last week's Science are correct!
I don't think I'm keeping fully on top of all the things going on with the network around the world. As I think you might have said earlier, we aren't doing a great job measuring surface T in a consistent manner. Loads of automation in many countries and now these issues with the marine data. Possible urbanization is the only thing with the land that might matter. I'll be doing some work on that next year.
On the SSTs, we don't do much here, but the HC people think it isn't much of an issue. NCDC does though hence their paper, which when it comes out will just open up this whole debate again about record years. Our error ranges circumvent a lot of this - showing as they do that the second decimal place shouldn't be relied upon. We're only measuring to an accuracy of 0.1.
I guess if you'd rounded to tenths none of the comments of the last few days would have happened. Our files work the numbers out in thousandths, but we round these for the web!

Keep up the good work all round!

I was looking for something a few months ago and I found that cheque from Hugh Elsasser!

Cheers
Phil

At 15:12 15/08/2007, James Hansen wrote:

> Hi Phil,
>
> Thanks, this is very helpful. Glad that you are keeping on top of these things -- we can only give a small fraction of our time to this topic, so it is good that someone keeps on top of it. By the time you are ready to retire global warming may be large enough that it doesn't require that level of expertise and detail. I am especially interested in your comments about NOAA SSTs -- they seemed just a hair cool to me.
>
> Jim
>
> On 8/15/07, **Phil Jones** <p.jones@uea.ac.uk> wrote:
>
> > Jim, Gavin,
> > Your recent finding of NCDC/GHCN not continuing to adjust
> > records in real time
> > and its impacts on blog sites, has alerted me to inform you of a few things

we've been doing over the past year. Don't pass any of this on via Real Climate
or whatever. Eventually, we will get around to documenting all we've been doing.

1. You may have noticed that Canada has changed loads of its WMO IDs. We've been in contact with Lucie Vincent there who's also been doing some homogeneity work
(which is good by the way). As a result of this we are applying adjustments in
real time to about 40 stations (mainly in the east of the country) in order to use
her long adjusted series. Why she adjusted records to an earlier period still isn't
clear to me. We are also getting on top of their station number changes, which
appear related to automation - and giving the new AWSs a new number.

By the way the AES web site enables you to get their real time data, but there is
no mention there of another page which gives the homogeneous series!

This is all less important with your method of combination. Ours requires normals.

2. We're getting all Australian data in real time direct from the National Climate Centre
in Melbourne.

3. We've got all the long NZ series they have homogenized.

Problems with both Australia and NZ associating these with WMO IDs we had.

Why it's always the English speaking countries is odd? Maybe this is because we can find out/understand more easily what they're doing!

4. My biggest worry is China. CMA don't measure at airports, and they keep moving suburban locations a few more miles out as the cities expand. I was there a month ago to give some talks. I've sent them all the CRU data for China, in the hope that they will reciprocate at some point and send me their adjusted data (for site moves, but not urban influences). They are doing
some reasonable work, but not seeing the big picture...

Other issues:

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Subject: The Guardian
From: Phil Jones <p.jones@uea.ac.uk>
Date: Thu, 16 Aug 2007 14:23:20 +0100
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, d.lister@uea.ac.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Gavin, Jim,
For some reason the Guardian has run with the story - NASA caught out by blogger. I've just spoken to two other papers - Times and the Mail on Sunday. I think I persuaded the former this was a storm in a tea cup, but the Mail on Sunday is generally big on conspiracies, so may not have there.

Cheers
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Jim,
We can't spare much time either. I have 10 years to go, by the way! I hope the Met Office predictions for 2015 in last week's Science are correct!
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I guess if you'd rounded to tenths none of the comments of the last few days would have happened. Our files work the numbers out in thousandths, but we round these for the web!

Keep up the good work all round!

I was looking for something a few months ago and I found that cheque from Hugh Elsasser!

Cheers
Phil

At 15:12 15/08/2007, James Hansen wrote:

> Hi Phil,
>
> Thanks, this is very helpful. Glad that you are keeping on top of these things -- we can only give a small fraction of our time to this topic, so it is good that someone keeps on top of it. By the time you are ready to retire global warming may be large enough that it doesn't require that level of expertise and detail. I am especially interested in your comments about NOAA SSTs -- they seemed just a hair cool to me.

Jim

On 8/15/07, **Phil Jones** <p.jones@uea.ac.uk> wrote:

> Jim, Gavin,
> Your recent finding of NCDC/GHCN not continuing to adjust
> records in real time
> and its impacts on blog sites, has alerted me to inform you of a few things
> we've been doing over the past year. Don't pass any of this on via
> Real Climate
> or whatever. Eventually, we will get around to documenting all
> we've been doing.
> 1. You may have noticed that Canada has changed loads of its WMO IDs. We've
> been in contact with Lucie Vincent there who's also been doing some
> homogeneity work
> (which is good by the way). As a result of this we are applying
> adjustments in
> real time to about 40 stations (mainly in the east of the country)
> in order to use
> her long adjusted series. Why she adjusted records to an earlier
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> By the way the AES web site enables you to get their real time
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The SST issues highlight that it is the biases (bucket/intakes and urbanization)
that are important as they are potentially pervasive. Individual station homogeneity issues cancel as sites are all affected differently. Getting this right has hardly any effect (none in fact) on the large-scale averages. Might affect smaller regions, and it's good to get as many right as possible, as the deniers will claim if one is wrong the whole lot is wrong. The law of large numbers seems to be totally forgotten by those collecting pictures of sitings across the US. Still it gives them something to do...

Cheers

Phil

Prof. Phil Jones
Climatic Research Unit Telephone +44 (0) 1603 592090
School of Environmental Sciences Fax +44 (0) 1603 507784
University of East Anglia
Norwich Email p.jones@uea.ac.uk
NR4 7TJ
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UK

Subject: More things in the British media
From: Phil Jones <p.jones@uea.ac.uk>
Date: Fri, 17 Aug 2007 09:06:08 +0100
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, d.lister@uea.ac.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Gavin,
It seems that Telegraph and also Radio4 ran with the story. Got up as usual at 6.45 turned on the Radio. Immediately got McIntyre - too much that early in the morning!
I see you're trying to respond on RealClimate. Saw a comment about the UK summer. Here's the CET figures

June 15.1 +0.9 wrt 61-90
July 15.2 -0.8
Aug (to15th) 16.3 +0.3

So far, therefore, it has been above normal - just. Nowhere near as bad as the year without a summer in 1816 (that had a JJA average of 13.4). By the way 1725 and 1695 were even colder at 13.1 and 13.2! People seem to adapt quite quickly to a degree of two increase and expect all seasons/years to be above.

If CET is at least 1.15 C above for Aug16-Dec31 we will break the 2006 record.

OK, it has been wet, but not everywhere. Scotland has had less precip. We're almost bang on normal here in Norwich !

Cheers
Phil

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Norwich Email p.jones@uea.ac.uk
NR4 7TJ
UK

Subject: Re: USHCN temperatures
From: Dale Kaiser <kaiserdp@ornl.gov>
Date: Thu, 13 Sep 2007 11:47:41 -0400
To: rruedy@giss.nasa.gov
CC: Jay Lawrimore <Jay.Lawrimore@noaa.gov>, James Hansen <jhansen@giss.nasa.gov>, cdiac@ornl.gov, Claude N Williams <Claude.N.Williams@noaa.gov>, Matthew Menne <Matthew.Menne@noaa.gov>, David Easterling <David.Easterling@noaa.gov>, Thomas C Peterson <Thomas.C.Peterson@noaa.gov>, kaiserdp@ornl.gov

Hello all, Dale Kaiser of CDIAC here.

For the GUIs CDIAC has prepared for obtaining USHCN data, we intentionally are only using data through the last complete year available, whereas, like Jay says, I'm sure that NCDC has files that go through the last month they have ready for distribution.

Dale

On Thursday 13 September 2007 11:41 am, Reto Ruedy wrote:
> Hi Jay,
>
> Thanks for your quick and helpful response - starting from USHCN's home page, I ended up at http://cdiac.ornl.gov/ftp/ushcn_monthly where the data are cut off at the end of 2005.
>
> Reto
>
> On Thu, 2007-09-13 at 11:05 -0400, Jay Lawrimore wrote:
> > Hi Reto,
> >
> > It is ok with us if you make the old USHCN file publicly available. For the most recent data we have online you can go to ftp://ftp.ncdc.noaa.gov/pub/data/ushcn/ . That has been updated through October 2006.
> >
> > Regarding old versions of files - Claude Williams recently responded to a request for USHCN data from the 1980s. He attempted to reproduce the data but I'm not sure he was successful. To answer your question - we do our best to provide the data requested but we have not archived all data files along the way.
> >
> > I will ask Claude if he can respond to your 4th question.
> >
> > Jay
> >
> > Reto Ruedy wrote the following on 9/13/2007 9:37 AM:
> > > Hi Jay,
> > >
> > > Recently, we replaced - for our temperature analysis - the USHCN data you gave us back in 2000 (last stage before filling in missing data) by the file "hcn_doe_mean_data" (ending in 2005). Needless to say, this had little impact on our global analysis.
> > >
> > > Recently, we have been approached by Steve McIntyre and his fans; in particular, he now is questioning some differences that originate in differences between the two USHCN files. He keeps insisting on seeing all our programs and input files, and I'm sure he bothered you - or whoever is in charge of USHCN now - with similar requests.

Four questions:

1 - Would it be ok with you if we made the old USHCN file publicly available ?

2 - Steve claims that USHCN data are publicly available to the end of 2006 - is that true and if so, where can I find it ?

3 - One person invoked FOIA to demand the release of the original temperature files that were used in 1999 as basis of one of our papers. Since you probably got similar requests, how do you respond ? Do you really keep for ever any files that were used in any of your papers ?

4 - Is using "hcn_doe_mean_data" disregarding any filler for missing data (marked M) a legitimate use of that file, and is this equivalent to using the SHAP version ?

Reto

--
Jay Lawrimore

Chief, Climate Monitoring Branch

NOAA's National Climatic Data Center

Scientific Services Division

Veach-Baley Federal Building

151 Patton Avenue, Asheville, NC 28801-5001

Ph. (828) 271-4750, Fax (828) 271-4328

Jay.Lawrimore@noaa.gov

Visit the NCDC Monitoring Site:

http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

Subject: Re: USHCN
From: Dale Kaiser <kaiserdp@ornl.gov>
Date: Thu, 13 Sep 2007 12:53:24 -0400
To: rruedy@giss.nasa.gov
CC: kaiserdp@ornl.gov

Reto,

While I am basically a user of USHCN (not a real expert like several NCDC folks), and CDIAC just emphasizes trying to make it easy for users to get the data, I will say that I've not read about any additional processing steps in between the SHAP and FILNET stages. But again, Claude, Matt, Jay, et al. at NCDC are best to ask about such details.

Best wishes,

Dale

On Thursday 13 September 2007 12:20 pm, Reto Ruedy wrote:

> Hi Dale,
>
> Thanks for your input; for our purposes, it doesn't matter where exactly the data stop, since GHCN will always be ahead of USHCN, and I hope Jim will agree to go with an annual update as far as the USHCN data are concerned.
>
> In 2000, we used the last stage (TOBS+MMTS+SHAP corrections) before the filling in and homogeneization steps of USHCN. I did not want to bother you each time to get that version, especially since I noticed that the filled in data are marked. So I thought, it would amount to the same if I just disregarded those data. Just want to make sure, I'm not missing any other changes that were made going from SHAP to FILNET.
>
> Thanks,
>
> Reto

Subject: Re: USHCN
From: Dale Kaiser <kaiserdp@ornl.gov>
Date: Thu, 13 Sep 2007 13:15:21 -0400
To: rruedy@giss.nasa.gov
CC: kaiserdp@ornl.gov

Indeed, Reto, I've been following this "issue" a bit over the past month or so.

Best wishes dealing w/the resultant hassles.

Dale

On Thursday 13 September 2007 01:11 pm, Reto Ruedy wrote:
> Dale,
>
> Thanks again; I wrote to you because your email was mentioned as contact for the other versions. I couldn't care less about these details, but some bothersome nitpickers with a large and vocal following do; a classical case of the blind leading the blind.
>
> Cheers,
>
> Reto
>
> On Thu, 2007-09-13 at 12:53 -0400, Dale Kaiser wrote:
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> > >
> > > Thanks,
> > >
> > > Reto

Subject: Re: <no subject>
From: Jack Kaye <jack.a.kaye@nasa.gov>
Date: Tue, 14 Aug 2007 12:42:12 -0400
To: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, Jim Hansen <jhansen@giss.nasa.gov>
CC: Leslie McCarthy <lnolan@giss.nasa.gov>, "Michael H. Freilich" <michael.h.freilich@nasa.gov>

Jim – thanks for sending this to me.

We have an action to respond to a Congressional question about this. Can you provide us with a relatively straightforward answer (with some #) that we can transmit? I don't think we need anything extensive or complex, but a relatively brief (but quantitative) "just the facts" summary would help. As a backup, it may be good if we could have some # in case we get asked for more detail (e.g., list of top 20 warm years, time series of global T for last 15 years and also for 1934 +/- 5 years).

Don is on travel, but may be checking e-mail.

Time scale is, of course, asap! - Jack

On 8/14/07 2:52 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:

> Don,
>
> These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.
>
> In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2001 and later, and only the United States.
>
> The flaw, even when present (in 2001-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.
>
> Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S. (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.
>
> Jim
>
> *The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and it has been so corrected.

On 8/13/07, **Donald Anderson** <donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> > wrote:

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov <mailto:Donald.Anderson-1@nasa.gov>

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov <mailto:svolz@nasa.gov> >
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
>
> *Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.*
>
> *The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.*
>
> *So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/>*

labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Dr. Jack A. Kaye
Assoc. Director for Research
Earth Science Division
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

Phone: 202-358-2559
Fax: 202-358-3172
E-mail: Jack.A.Kaye@nasa.gov

Subject: Re: <no subject>
From: Jack Kaye <jack.a.kaye@nasa.gov>
Date: Wed, 15 Aug 2007 06:18:02 -0400
To: eos chem/climate meeting list <jhansen@giss.nasa.gov>
CC: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, Leslie McCarthy <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>

Jim - thanks for sending. I'll watch for next installment. I appreciate the prompt turnaround
- Jack

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> Jim:
> FYI
> Any comment?
> Don
>
> ---
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov
> <mailto:Donald.Anderson-1@nasa.gov>
>
> ------ Forwarded Message

From: "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov <mailto:svolz@nasa.gov> >
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
Cc: "Kaye, Jack A. (HQ-DK000)" < jack.a.kaye@nasa.gov <mailto:jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
>
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corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Dr. Jack A. Kaye Phone: 202-358-2559
Assoc. Director for Research Fax: 202-358-3172
Earth Science Division E-mail: Jack.A.Kaye@nasa.gov
<mailto:Jack.A.Kaye@nasa.gov>
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

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Earth Science Division
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

E-mail: Jack.A.Kaye@nasa.gov

Subject: FW: <no subject>
From: Jack Kaye <jack.a.kaye@nasa.gov>
Date: Wed, 22 Aug 2007 05:59:13 -0400
To: Jim Hansen <jhansen@giss.nasa.gov>

Jim – did you ever send me anything subsequently? Did I miss the promised figures? We have a legislative action to which we must respond. Thanks for your help. - Jack

------ Forwarded Message
From: "Cohen, Ellen (HQ-DI000)" <ellen.cohen-1@nasa.gov>
Date: Tue, 21 Aug 2007 16:31:44 -0400
To: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Thompson, Tabatha (HQ-NB000)" <Tabatha.Thompson-1@nasa.gov>
Cc: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>
Conversation: <no subject>
Subject: Re: <no subject>

Jack,

Did you ever get any more information for this request? We need ot get something back to the Hill staffer this week. Thanks.

Ellen

On 8/15/07 11:25 AM, "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov> wrote:

> Here's the input I got from Jim as of 2:27 AM this morning. I haven't seen anything since unless I missed an e-mail. - Jack
>
> ------ Forwarded Message
> **From:** James Hansen <jhansen@giss.nasa.gov>
> **Date:** Wed, 15 Aug 2007 02:27:01 -0400
> **To:** "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>
> **Cc:** "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, Leslie McCarthy <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>
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> **Date:** Mon, 13 Aug 2007 12:01:06 -0400
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Dr. Jack A. Kaye Phone: 202-358-2559
Assoc. Director for Research Fax: 202-358-3172
Earth Science Division E-mail: Jack.A.Kaye@nasa.gov
<mailto:Jack.A.Kaye@nasa.gov>
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

------ End of Forwarded Message

--

Ellen M. Cohen
Science Mission Directorate
NASA Headquarters
300 E Street SW
Washington, DC 20546
202-358-0812
ellen.cohen-1@nasa.gov

------ End of Forwarded Message

Subject: Re: <no subject>
From: Jack Kaye <jack.a.kaye@nasa.gov>
Date: Thu, 23 Aug 2007 16:43:27 -0400
To: Jim Hansen <jhansen@giss.nasa.gov>
CC: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, Leslie McCarthy <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>, Ellen Cohen <ellen.cohen-1@nasa.gov>

Jim – in attempting to close the loop on this so we can deal with the legislative action, I wanted to see if we could come up with any more quantitative information. I looked at the longer text that you had the link to ("The Real Deal: Usufruct & the Gorilla).

First, it appears that the "XX July 2007" in your message below should be 7 August 2007.

In terms of 1934 vis a vis the more recent years, the key data I see from your text that may be worth citing are:

- The four warmest US years on record were 1921, 1934, 1998, and 2006
- The mean temperature anomaly in the US was 1.25 deg C in 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree difference between the two, which is smaller than the uncertainty in the actual numbers.
- In 1934 the US was warm relative to much of the rest of the word, while in 2006 the world was much warmer.

If these points are enough, we can try to get them into a short paragraph. How about this?

The computer program used by Dr. Hansen to create the temperature record is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen in a peer-reviewed publication from 2001. The flaw affected temperatures only in the United States and only after 2000. As explained by Dr. Hansen in an e-mail sent out on August 10, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Thomas Karl of NOAA's National Climatic Data Center and his colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Dr. Hansen's computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and his computer program picked up the data for these same stations reported in the World Meteorological Organization's GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISS Temperature web page. Based on the current analysis, the four warmest years in the US record were 1921, 1934, 1998, and 2006. The mean temperature anomaly in the US was approximately 1/10 degree C greater in 1934 (1.25 degrees) than in 2006 (1.13 degrees); this difference is less than the uncertainty in the calculated mean. One point worth noting is that in 1934, the US was warm relative to much of the rest of the world, while in 2006, the warmth of the US was accompanied by that of much of the globe.

Would you be okay with this? If not, do you have suggestions? I don't know that we'd need much more than this!

On 8/15/07 6:18 AM, "Jack Kaye" <jack.a.kaye@nasa.gov> wrote:

Jim – thanks for sending. I'll watch for next installment. I appreciate the prompt turnaround
- Jack

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From: "Volz, Stephen M. (HQ-DK000)" <
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>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <
donald.anderson-1@nasa.gov
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<mailto:hal.maring@nasa.gov> >
Cc: "Kaye, Jack A. (HQ-DK000)" <
jack.a.kaye@nasa.gov
<mailto:jack.a.kaye@nasa.gov> >, "Brown,
Dwayne C. (HQ-NB060)" <
dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
>
> *Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.*
>
> *The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn*

out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/> <http://climateaudit.com/> labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and

2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission
Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Dr. Jack A. Kaye Phone: 202-358-2559
Assoc. Director for Research Fax: 202-358-3172
Earth Science Division E-mail: Jack.A.Kaye@nasa.gov
<mailto:Jack.A.Kaye@nasa.gov>
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

Dr. Jack A. Kaye Phone: 202-358-2559
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Dr. Jack A. Kaye Phone: 202-358-2559
Assoc. Director for Research Fax: 202-358-3172
Earth Science Division E-mail: Jack.A.Kaye@nasa.gov
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

Subject: Re: USHCN temperatures
From: Jay Lawrimore <Jay.Lawrimore@noaa.gov>
Date: Thu, 13 Sep 2007 11:05:24 -0400
To: rruedy@giss.nasa.gov
CC: James Hansen <jhansen@giss.nasa.gov>, cdiac@ornl.gov, Claude N Williams <Claude.N.Williams@noaa.gov>, Matthew Menne <Matthew.Menne@noaa.gov>, David Easterling <David.Easterling@noaa.gov>, Thomas C Peterson <Thomas.C.Peterson@noaa.gov>

Hi Reto,

It is ok with us if you make the old USHCN file publicly available. For the most recent data we have online you can go to ftp://ftp.ncdc.noaa.gov/pub/data/ushcn/ . That has been updated through October 2006.

Regarding old versions of files - Claude Williams recently responded to a request for USHCN data from the 1980s. He attempted to reproduce the data but I'm not sure he was successful. To answer your question - we do our best to provide the data requested but we have not archived all data files along the way.

I will ask Claude if he can respond to your 4th question.

Jay

Reto Ruedy wrote the following on 9/13/2007 9:37 AM:

> Hi Jay,
>
> Recently, we replaced - for our temperature analysis - the USHCN data you gave us back in 2000 (last stage before filling in missing data) by the file "hcn_doe_mean_data" (ending in 2005). Needless to say, this had little impact on our global analysis.
>
> Recently, we have been approached by Steve McIntyre and his fans; in particular, he now is questioning some differences that originate in differences between the two USHCN files. He keeps insisting on seeing all our programs and input files, and I'm sure he bothered you - or whoever is in charge of USHCN now - with similar requests.
>
> Four questions:
>
> 1 - Would it be ok with you if we made the old USHCN file publicly available ?
>
> 2 - Steve claims that USHCN data are publicly available to the end of 2006 - is that true and if so, where can I find it ?
>
> 3 - One person invoked FOIA to demand the release of the original temperature files that were used in 1999 as basis of one of our papers. Since you probably got similar requests, how do you respond ? Do you really keep for ever any files that were used in any of your papers ?
>
> 4 - Is using "hcn_doe_mean_data" disregarding any filler for missing data (marked M) a legitimate use of that file, and is this equivalent to using the SHAP version ?

> Reto

--

Jay Lawrimore
Chief, Climate Monitoring Branch
NOAA's National Climatic Data Center
Scientific Services Division
Veach-Baley Federal Building
151 Patton Avenue, Asheville, NC 28801-5001
Ph. (828) 271-4750, Fax (828) 271-4328
Jay.Lawrimore@noaa.gov

Visit the NCDC Monitoring Site:
http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

Subject: Re: USHCN temperatures
From: Jay Lawrimore <Jay.Lawrimore@noaa.gov>
Date: Thu, 13 Sep 2007 11:46:26 -0400
To: rruedy@giss.nasa.gov
CC: James Hansen <jhansen@giss.nasa.gov>, cdiac@ornl.gov, Claude N Williams <Claude.N.Williams@noaa.gov>, Matthew Menne <Matthew.Menne@noaa.gov>, David Easterling <David.Easterling@noaa.gov>, Thomas C Peterson <Thomas.C.Peterson@noaa.gov>

That's not too surprising. The data on our ftp site are usually more up to date.

Reto Ruedy wrote the following on 9/13/2007 11:41 AM:

> Hi Jay,
>
> Thanks for your quick and helpful response - starting from USHCN's home page, I ended up at http://cdiac.ornl.gov/ftp/ushcn_monthly where the data are cut off at the end of 2005.
>
> Reto
>
> On Thu, 2007-09-13 at 11:05 -0400, Jay Lawrimore wrote:
>
> > Hi Reto,
> >
> > It is ok with us if you make the old USHCN file publicly available. For the most recent data we have online you can go to ftp://ftp.ncdc.noaa.gov/pub/data/ushcn/ . That has been updated through October 2006.
> >
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> >
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> >
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> > >
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> > >
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Four questions:

1 - Would it be ok with you if we made the old USHCN file publicly available ?

2 - Steve claims that USHCN data are publicly available to the end of 2006 - is that true and if so, where can I find it ?

3 - One person invoked FOIA to demand the release of the original temperature files that were used in 1999 as basis of one of our papers. Since you probably got similar requests, how do you respond ? Do you really keep for ever any files that were used in any of your papers ?

4 - Is using "hcn_doe_mean_data" disregarding any filler for missing data (marked M) a legitimate use of that file, and is this equivalent to
using the SHAP version ?

Reto

--
Jay Lawrimore

Chief, Climate Monitoring Branch

NOAAâ€™s National Climatic Data Center

Scientific Services Division

Veach-Baley Federal Building

151 Patton Avenue, Asheville, NC 28801-5001

Ph. (828) 271-4750, Fax (828) 271-4328

Jay.Lawrimore@noaa.gov

Visit the NCDC Monitoring Site:

http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

--
Jay Lawrimore
Chief, Climate Monitoring Branch
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Â
Visit the NCDC Monitoring Site:
http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

X-IronPort-AV: E=Sophos;i="4.19,245,1183352400"; d="scan'208,217";a="68961035"
User-Agent: Microsoft-Entourage/11.3.3.061214
Date: Fri, 10 Aug 2007 10:53:17 -0400
Subject: FW: Fyi
From: "Lewis, Charles (National Post)" <clewis@nationalpost.com>
To: <lnolan@giss.nasa.gov>
Thread-Topic: Fyi
Thread-Index: AcfbUORzIscTZEdEEdyPygANk3k5TAADUrU4
X-OriginalArrivalTime: 10 Aug 2007 14:53:16.0621 (UTC) FILETIME=[2F0E17D0:01C7DB5E]

Charles Lewis
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e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com
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------ Forwarded Message
From: "Lewis, Charles (National Post)" <clewis@nationalpost.com>
Date: Fri, 10 Aug 2007 09:18:08 -0400
To: National Post <clewis@nationalpost.com>
Conversation: Fyi
Subject: Fyi

Steve McIntyre, of Toronto operates www.climateaudit.org and began to investigate the data and the methods used to arrive at the results that were graphed by NASA's Goddard Institute for Space Studies (GISS).

What he discovered was truly amazing. Since NASA does not fully publish the computer source code and formulae used to calculate the trends in the graph, nor the correction used to arrive at the "corrected" data. He had to reverse engineer the process by comparing the raw data and the processed data..

Here is one of his first posts where he begins to understand what is happening. "This imparts an upward discontinuity of a deg C in wintertime and 0.8 deg C annually. I checked the monthly data and determined that the discontinuity occurred on January 2000 - and, to that extent, appears to be a Y2K problem. I presume that this is a programming error."

He further refines his argument showing the distribution of the error, and the problems with the USHCN temperature data. He also sends an email to NASA GISS advising of the problem.

He finally publishes it here, stating that NASA made a correction not only on their own web page, attributing the discovery to McIntyre, but NASA also issued a corrected set of temperature anomaly data which you can see here:

http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

Steve McIntyre posted this data from NASA's newly published data set from Goddard Institute of Space Studies (GISS) These numbers represent deviation from the mean temperature calculated from temperature measurement stations throughout the USA.

According to the new data published by NASA, 1998 is no longer the hottest year ever. 1934 is.

Four of the top 10 years of US CONUS high temperature deviations are now from the 1930s: 1934, 1931, 1938 and 1939, while only 3 of the top 10 are from the last 10 years (1998, 2006, 1999). Several years (2000, 2002, 2003, 2004) fell well down the leaderboard, behind even 1900. (World rankings of temperature are calculated separately.)

Top 10 GISS U.S. Temperature deviation (deg C) in New Order 8/7/2007

Year	Old	New
1934	1.23	1.25
1998	1.24	1.23
1921	1.12	1.15
2006	1.23	1.13

1931	1.08	1.08
1999	0.94	0.93
1953	0.91	0.90
1990	0.88	0.87
1938	0.85	0.86
1939	0.84	0.85

Here's the old order of top 10 yearly temperatures.

Year	Old	New
1998	1.24	1.23
1934	1.23	1.25
2006	1.23	1.13
1921	1.12	1.15
1931	1.08	1.08
1999	0.94	0.93
1953	0.91	0.90
2001	0.90	0.76
1990	0.88	0.87
1938	0.85	0.86

I salute the work of Steven McIntyre, he has now made two major contributions to climate science.
1) Proving how the Mann "hockey stick" used in all Gore's movie, An Inconvenient Truth, was based on unsupportable data and methods.
2) Proving how yearly temperature anomalies for the USA are based on data that had been processed incorrectly.

Dr. Roger Pielke of the University of Colorado also deserves credit becuase he was the one who encouraged me to pursue the www.surfacestations.org project due to his broad work on land use change and it's affect on regional and local climate.

Posted by Anthony Watts at 04:08 PM | Permalink |

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e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com
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------ End of Forwarded Message

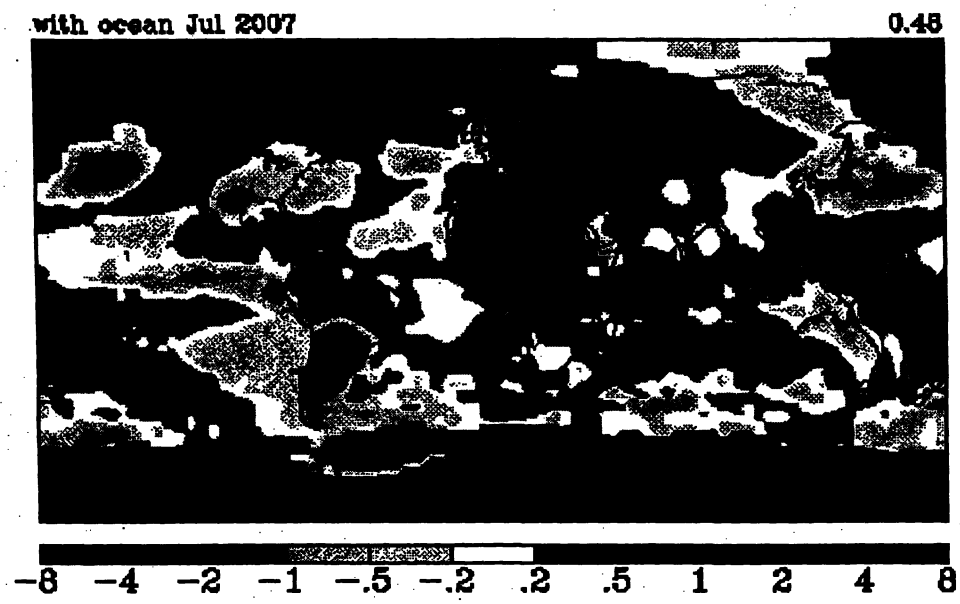
Subject: GISTEMP
From: Ken Lo <cdkkl@giss.nasa.gov>
Date: Tue, 7 Aug 2007 11:31:12 -0400 (EDT)
To: "Reto A. Ruedy" <cdrar@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

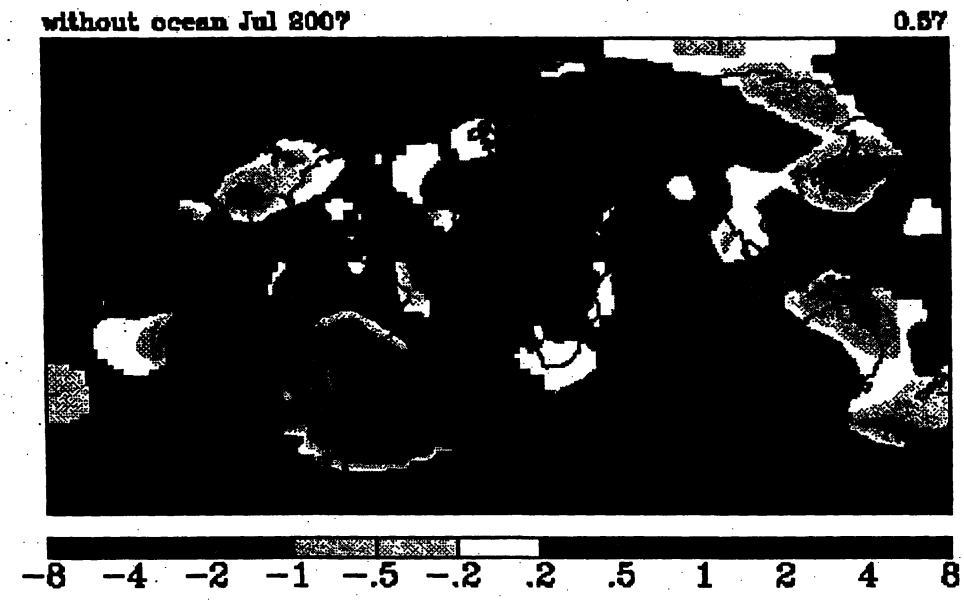
I have updated July gistemp.

Ken

—gistemp.gif———

GISTEMP





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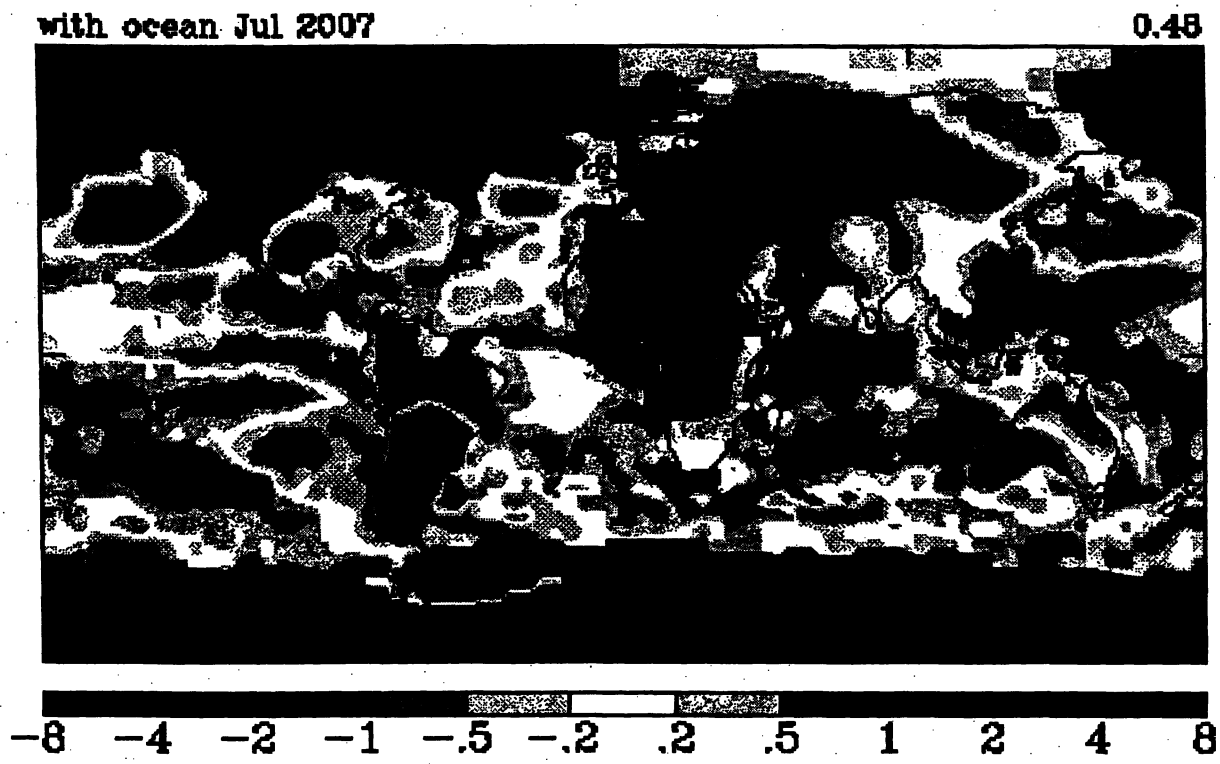
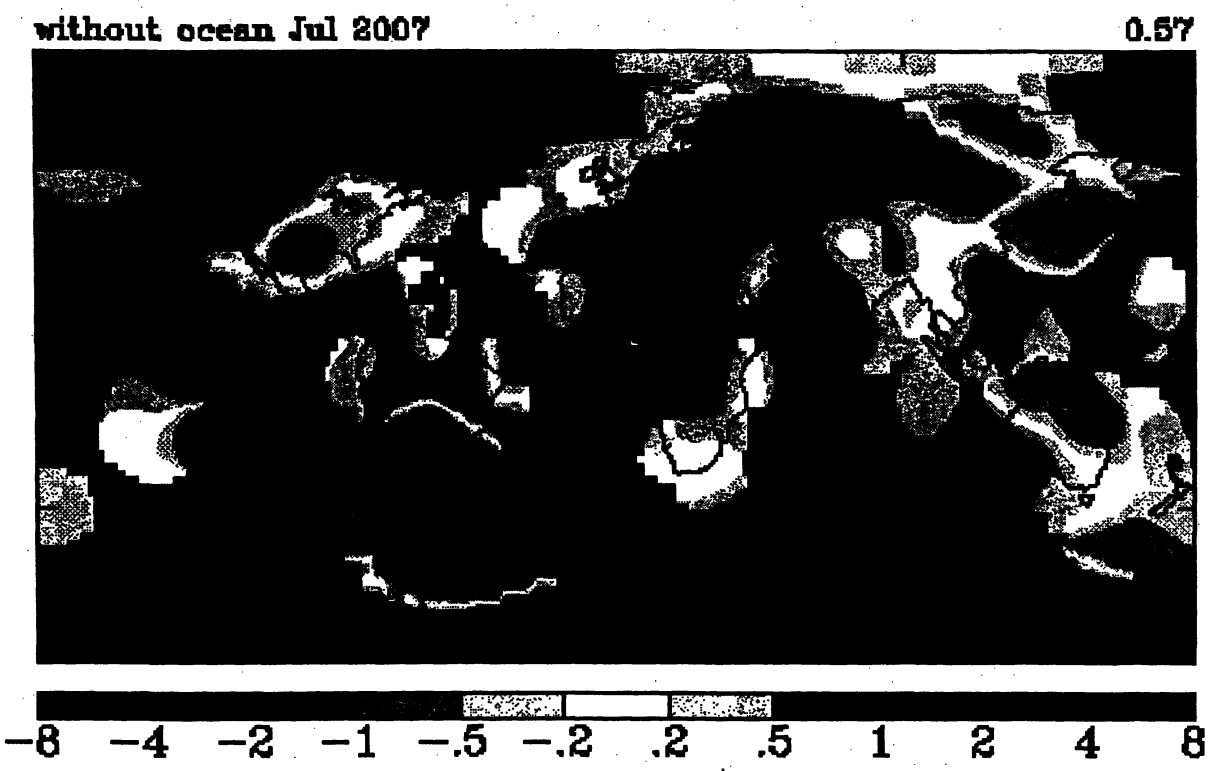
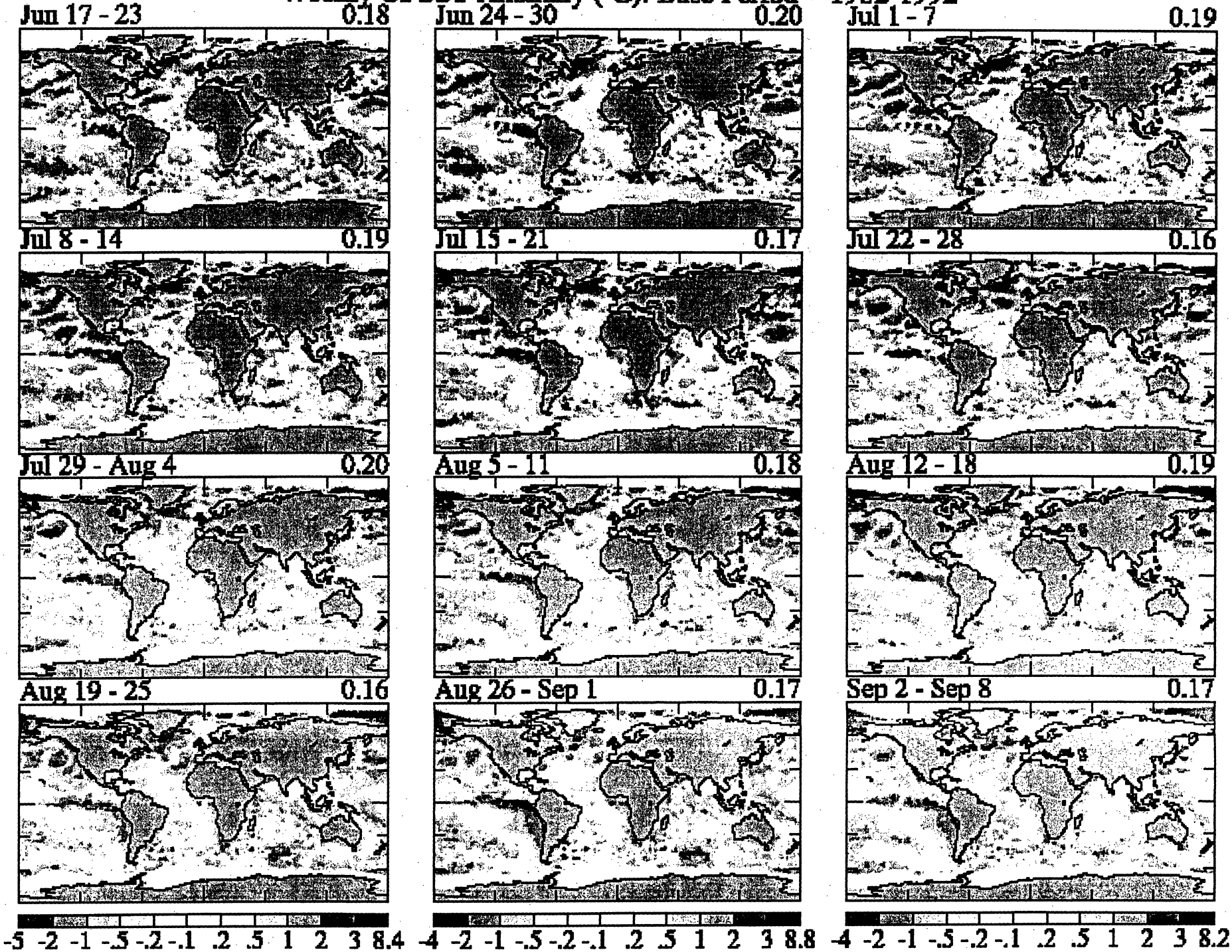
GISTEMP


with ocean Jul 2007
0.48
−8 −4 −2 −1 −.5 −.2 .2 .5 1 2 4 8


without ocean Jul 2007
0.57
−8 −4 −2 −1 −.5 −.2 .2 .5 1 2 4 8

Subject: SST Anomaly
From: Ken Lo <cdkkl@giss.nasa.gov>
Date: Mon, 10 Sep 2007 09:10:39 -0400 (EDT)
To: Makiko Sato <makis@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>

Jim and Makiko, This week's sst anomaly maps are attached. I am working on GISTEMP now. It will take a bit longer this month because Reto made some changes last two weeks and we have to do some testing. Ken Attachment Converted: "c:\program files\qualcomm\eudora\attach\weekly_SST51.gif"


Weekly OI SST Anomaly (°C): Base Period = 1982-1992
Jun 17 - 23
0.18
Jun 24 - 30
0.20
Jul 1 - 7
0.19
Jul 8 - 14
0.19
Jul 15 - 21
0.17
Jul 22 - 28
0.16
Jul 29 - Aug 4
0.20
Aug 5 - 11
0.18
Aug 12 - 18
0.19
Aug 19 - 25
0.16
Aug 26 - Sep 1
0.17
Sep 2 - Sep 8
0.17
-5 -2 -1 -.5 -.2 -.1 .2 .5 1 2 3 8.4
-4 -2 -1 -.5 -.2 -.1 .2 .5 1 2 3 8.8
-4 -2 -1 -.5 -.2 -.1 .2 .5 1 2 3 8.2

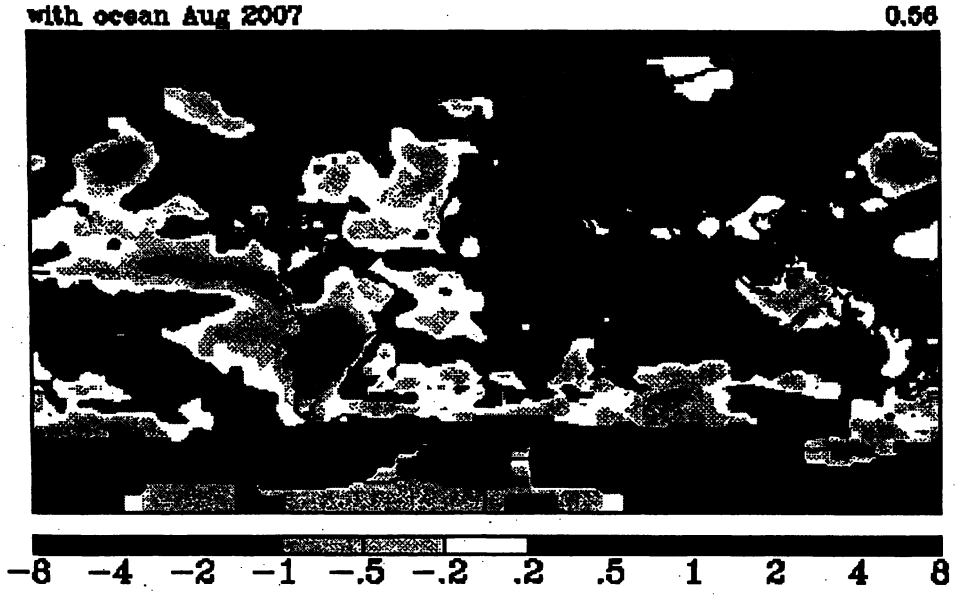
Subject: GISTEMP
From: Ken Lo <cdkkl@giss.nasa.gov>
Date: Mon, 10 Sep 2007 13:21:45 -0400 (EDT)
To: "Reto A. Ruedy" <cdrar@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

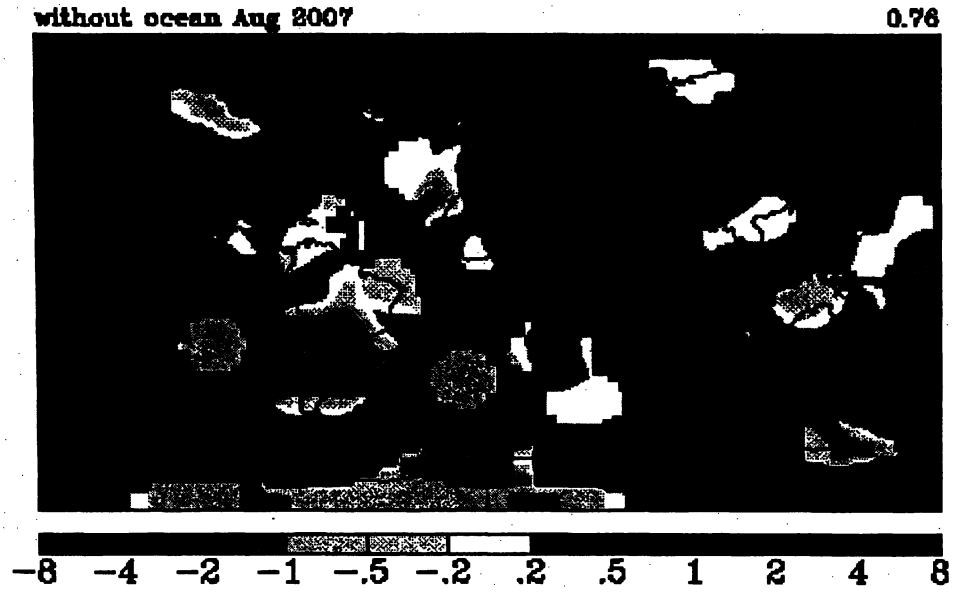
I have updated this month's GISTEMP. Reto and I have checked
the new procedure against the old. The results are the same.

Ken

—gistemp.gif———————————————————————————————————————

GISTEMP





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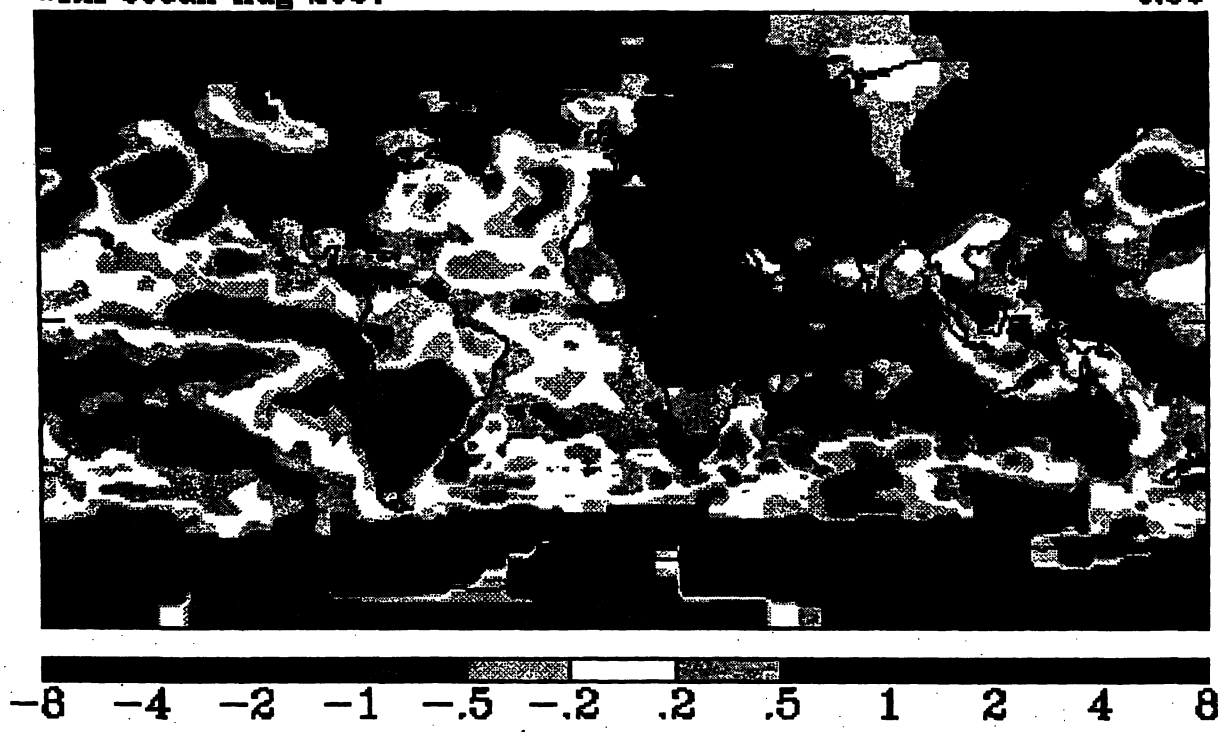
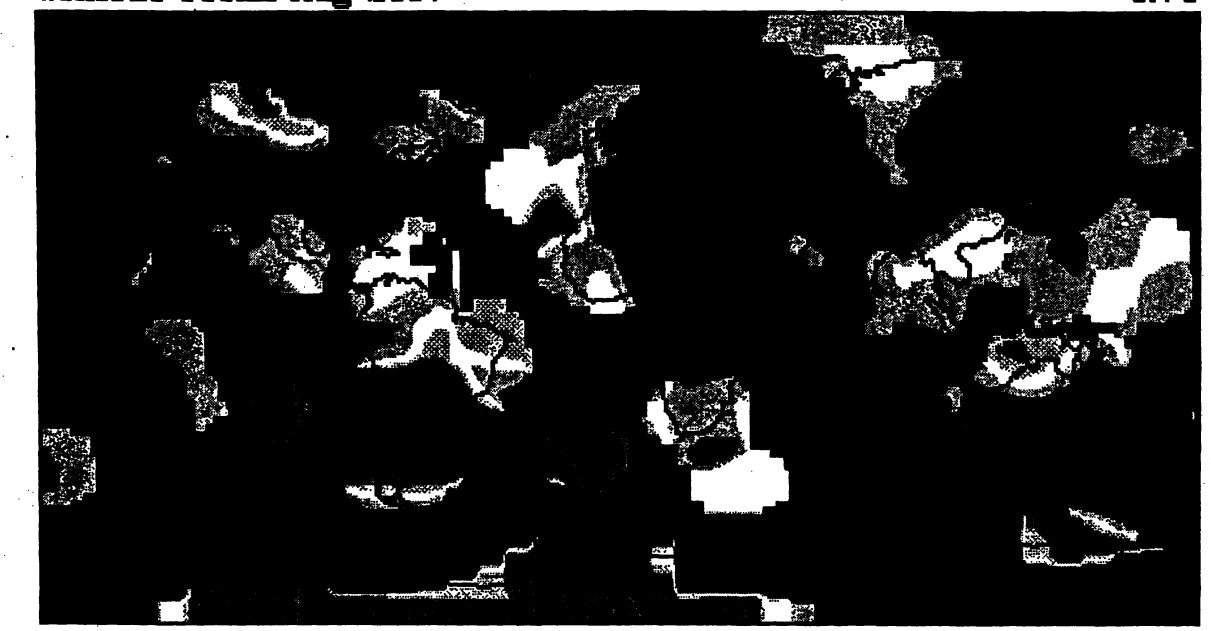
GISTEMP

with ocean Aug 2007 0.56



−8 −4 −2 −1 −.5 −.2 .2 .5 1 2 4 8

without ocean Aug 2007 0.76



−8 −4 −2 −1 −.5 −.2 .2 .5 1 2 4 8

Subject: Questions on correction to flaw in NASA program
From: mario@cseindia.org
Date: Tue, 11 Sep 2007 11:16:23 +0530
To: James.E.Hansen@nasa.gov, [redacted]gmail.com

Dear Dr. Hansen,
I am with the Centre for Science and Environment (CSE), New Delhi, India and writing to you in regards to the news about the recently discovered flaw in NASA's program that computes the global surface temperature. The story is for CSE's fortnightly magazine, Down To Earth.

As part of the background reading for the story, I read through your comments and posts, 'The Real Deal: Usufruct & the Gorilla' in particular. There were some questions that came up, and I request your comments on these.

(1) This is not no relevant but for the record, when did Steve McIntyre contact GISS/NASA regarding the flaw?

(2) Is there an official statement or news release by GISS about the correction that could be quoted?

(3) I do realize that the ranking of warmest years in the U.S. is not so relevant, more so at the global scale. But for purposes of this story is there a table of the rankings prior and after the correction.

(4) From what I understand the correction only affected U.S. temperatures only in 2000 and later. But your colleague Dr. Schmidt said earlier years were affected albeit only a minor change. He said it was due to adjustments made for rural vs. urban trends. His post I'm referring to is:
{http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-that/"
}http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-that/

(5) Where could I find high resolution images of Figures 1, 2 and 3 in your post 'The Real Deal: Usufruct & the Gorilla.'

Your post explained the scientific arguments quite well and I haven't asked questions on those. However, I request your permission to use material from your posts for the story. Thanking you,

Kind regards,

Mario D'Souza
Research Associate
Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi 110 062
Tel: 91-11-29955778, 29955779 (Extn: 220)
Fax: 91-11-29955879
Email: mario@cseindia.org

Subject: Questions on correction to flaw in NASA program
From: mario@cseindia.org
Date: Mon, 17 Sep 2007 14:02:05 +0530
To: James.E.Hansen@nasa.gov, _ gmail.com

Dear Dr. Hansen,
I am with the Centre for Science and Environment, New Delhi, India and emailed you last week with some questions on the recently discovered flaw in the NASA program. That email is attached below for your reference. Requesting your comments to the questions. Thanking you.

Kind regards,

Mario D'Souza
Research Associate
Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi 110 062
Tel: 91-11-29955778, 29955779 (Extn: 220)
Fax: 91-11-29955879
Email: mario@cseindia.org

On 11 Sep 2007 at 11:16, James.E.Hansen@nasa.gov, hans wrote:

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>
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material from your posts for the story. Thanking you,

Kind regards,

Mario D'Souza
Research Associate
Centre for Science and Environment
41, Tughlakabad Institutional Area
New Delhi 110 062
Tel: 91-11-29955778, 29955779 (Extn: 220)
Fax: 91-11-29955879
Email: mario@cseindia.org

Subject: GISS Raw Data
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Sat, 4 Aug 2007 17:28:44 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>, <rruedy@giss.nasa.gov>

Dear Sirs,

In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.

I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?

In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention, Stephen McIntyre

Subject: RE: GISS Raw Data
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Wed, 8 Aug 2007 10:46:10 -0400
To: <rruedy@giss.nasa.gov>
CC: "James E. Hansen" <jhansen@giss.nasa.gov>

Dear Dr Ruedy,

Thank you for this information and for the courteous acknowledgement at your website. I can now see where your post-2000 data comes from, but I remain unable to identify a digital source for your data prior to 2000 from available information. I have compared GISS raw to all the archived USHCN versions and have been unable to find a match for US data. In some cases, the differences are substantial.

Can you provide me with (1) a URL from which the U.S. data prior to 2000 (in the version that you used) can be downloaded. (2) If this is no longer possible due to the passage of time, could you please provide me with a copy of the data that you used (or upload it to an area of your FTP site) and also provide its provenance and date of acquisition? Obviously mere print citations are inadequate for this purpose.

I would like to assess the impact of these modifications on the US and global averages for myself. I would appreciate a copy of the source code used for these calculations.

Regards, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Tuesday, August 07, 2007 5:33 PM
To: Steve McIntyre
Cc: James E. Hansen; gavin@giss.nasa.gov
Subject: Re: GISS Raw Data

Dear Sir,

As to the question about documentation, the basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence:"Input data for the analysis ,...., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

In 2000, USHCN provided us with a file with corrections not contained in the GHCN data. Unlike the GHCN data, that product is not kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend those data in our further updates (2000-present).

I agree with you that this simple procedure creates an artificial step if some new corrections were applied to the newest data, rather than bringing the older data in sync with the latest measurements - as I naively assumed. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other

way round with the plus-corrections slightly outweighing the minus-corrections.

Although trying to eliminate those steps should have little impact on the US temperature trend (much less the global trend), it seems a good idea to do so and I'd like to thank you for bringing this oversight to our attention.

When we did our monthly update this morning, an offset based on the last 10 years of overlap in the two data sets was applied and our on-line documentation was changed correspondingly with an acknowledgment of your contribution. This change and its effect will be noted in our next paper on temperature analysis and in our end-of-year temperature summary.

The effect on global means and all our tables was less than 0.01 C. In the display most sensitive to that change - the US-graph of annual means - the anomalies decreased by about 0.15 C in the years 2000-2006.

Respectfully,

Reto A Ruedy

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.
>
> I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?
>
> In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention, Stephen McIntyre

Subject: NASA GISS Calculations
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Fri, 31 Aug 2007 10:56:34 -0400
To: "'James E. Hansen'" <jhansen@giss.nasa.gov>
CC: <rruedy@giss.nasa.gov>

Dear Drs Hansen and Ruedy,

I am unable to replicate how you combined data sets at Kalakan, Siberia (as an example, but this applies to other stations,)

Prior to 1987, there are two versions of this series, the values of which are identical for most periods. Nevertheless, the combined version is 0.1 deg C lower than these values.

Can you provide an explanation for this? Thank you for your attention.

Yours truly, Stephen McIntyre

PS. I would appreciate a copy of the source code that you use for station adjustments as the verbal descriptions in Hansen et al 1999, 2001 are insufficient to replicate results such as the one cited above or the change in versions previously noted,

Subject: Quarterly Averages
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Wed, 5 Sep 2007 11:49:36 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>, <rruedy@giss.nasa.gov>

Dear Sirs,

In the NASA GISS dset=0 calculations, you calculate quarterly averages for periods where only 2 months are present. I have been unable to locate a description of the procedure used for this calculation in Hansen and Lebedeff 1987, Hansen et al 1999 or Hansen et al 2001. Can you please direct me to a publication in which this step of your calculation is described or alternatively provide me with an explanation. Thank you for your attention.

Regards, Steve McIntyre

Subject: Gistemp Changes
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Wed, 12 Sep 2007 15:38:40 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>
CC: <rruedy@giss.nasa.gov>

Dear Sirs, I notice that you've changed the historical data for some US stations since Sep 7, 2007. In particular, I noticed that temperatures for Detroit Lakes MN in the early part of the century were reduced by nearly 0.5 deg C. These changes are subsequent to your changes in August 2007 for the changing versions. To my knowledge, there is no explanation for this most recent change and I was wondering what the reason is.

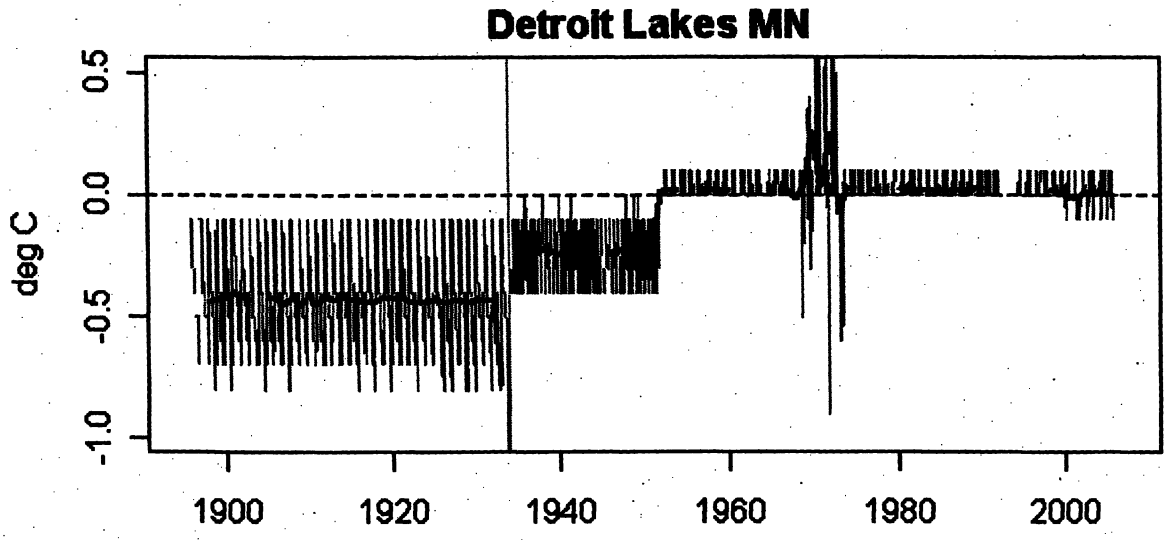


Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes MN and Aug 25, 2007 version.

Thank you for your attention.

Regards,

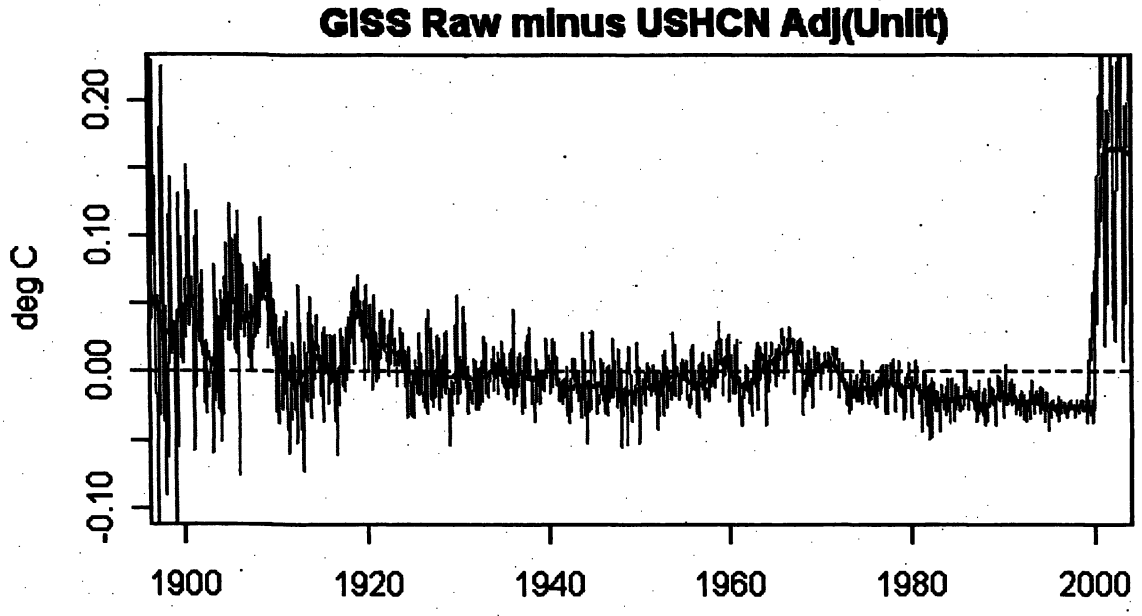
Steve McIntyre

Subject: RE: Gistemp Changes
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Mon, 17 Sep 2007 09:05:09 -0400
To: <rruedy@giss.nasa.gov>, "James E. Hansen" <jhansen@giss.nasa.gov>

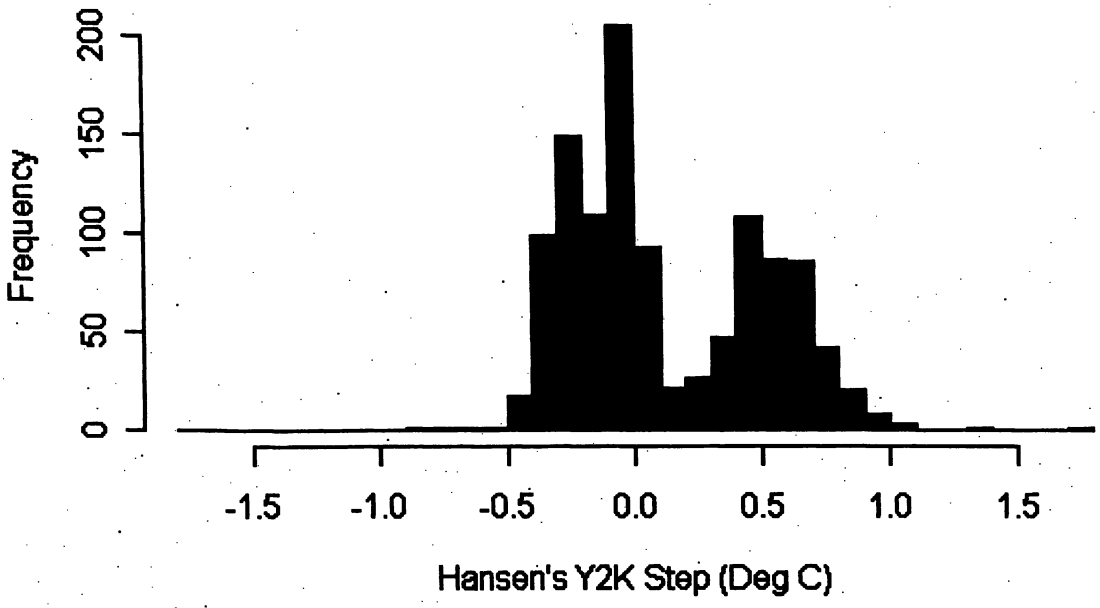
Dear Sirs,

I see that you have decided to report the change in methodology as requested in my previous email. While you should have reported the change in methodology when it was made, it is better late than never.

In your new webpage, you state: " This August 2007 change received international attention via discussions on various blogs and repetition by some other media, with no graphs provided to show the magnitude of the effect." This is incorrect and I request that you correct this statement. On Aug 6, 2007, at Climate Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were provided to estimate the magnitude of the effect. The first graph shown below estimated the impact on the U.S. temperature history at a little more than 0.15 deg C. Despite having no access to your source code, this proved to be an accurate estimate.



The next graph shown below shows the distribution of changes over the 1221 U.S. stations, which are very substantial in individual cases. Despite your professed concern for illustrating the impact of changes, you did not yourself provide any graph to show the magnitude of the changes on individual stations, nor did you even provide explicit notice on your webpage that any changes had been made.



Would you please correct the incorrect information on your webpage. This request is made pursuant to the Data Quality Act.

Yours truly,

Stephen McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Friday, September 14, 2007 6:12 PM
To: Steve McIntyre
Cc: James E. Hansen
Subject: Re: Gistemp Changes

Dear Sir,

As indicated in the description of our input files, we switched from the old year 2000 version of USHCN to the current version. The differences you noticed reflect corrections that were made by USHCN within the last six years.

Reto A. Ruedy

On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:
> Dear Sirs, I notice that you've changed the historical data for some
> US stations since Sep 7, 2007. In particular, I noticed that
> temperatures for Detroit Lakes MN in the early part of the century

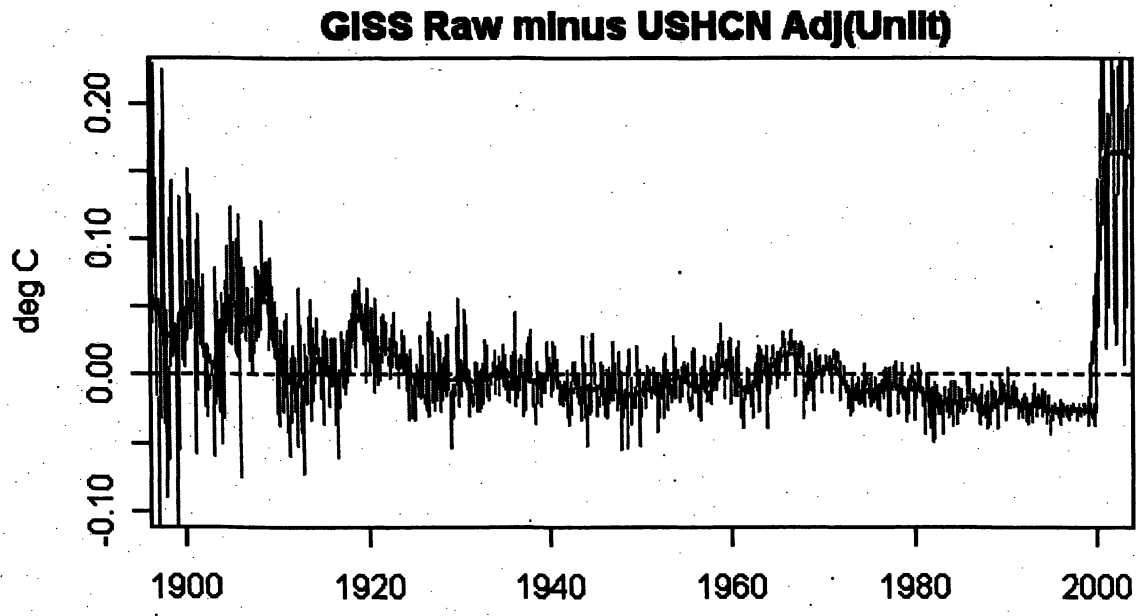
Subject: RE: Gistemp Changes
From: "Steve McIntyre" <stephen.mcintyre@utoronto.ca>
Date: Mon, 17 Sep 2007 13:48:34 -0400
To: <rruedy@giss.nasa.gov>, <infoquality@nasa.giv>, "James E. Hansen" <jhansen@giss.nasa.gov>

Dear Sirs,

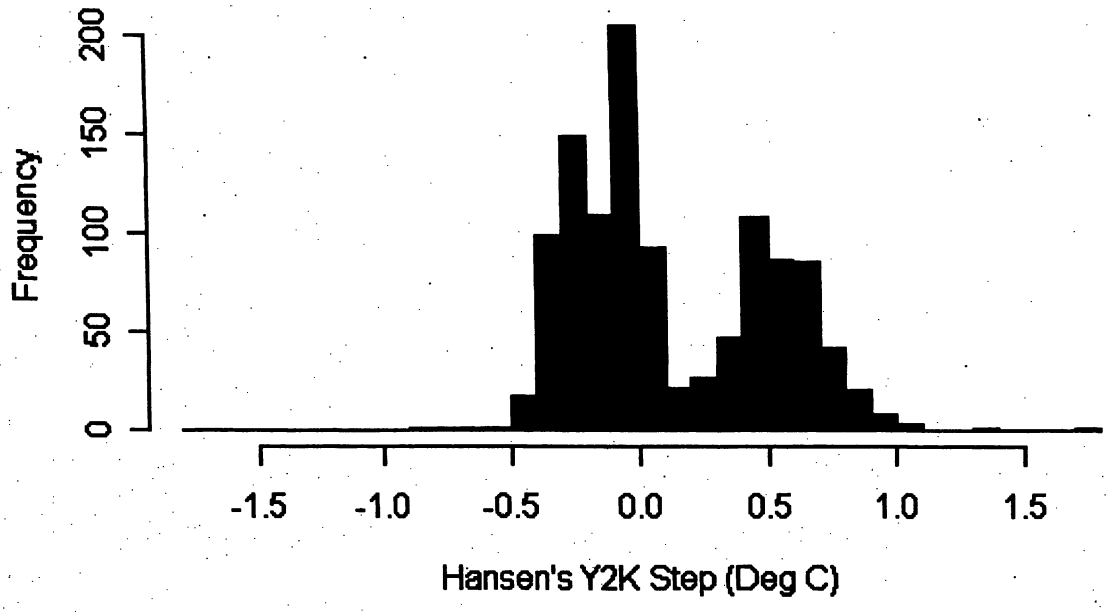
Your revised webpage http://data.giss.nasa.gov/gistemp/ contains the following incorrect statement: "This August 2007 change received international attention via discussions on various blogs and repetition by some other media, with **no graphs provided to show the relevance of the effect.**"

This is incorrect and I request that you correct this statement. As I advised you previously, on Aug 6, 2007, at Climate Audit, http://www.climateaudit.org/?p=1868 , the two graphs below showed the relevance of the effect to U.S. temperature history and to U.S. stations.

The first graph shown below showed that the error was relevant to U.S. temperature history - a topic specifically considered in Hansen et al 2001.



The NASA website provides individual station histories, as well as U.S. and global estimates. The graph below showed the error was relevant to individual U.S. station histories.



The claim that "no graphs provided to show the relevance of the effect" remains incorrect. Once again, please correct the false statement on the NASA webpage http://data.giss.nasa.gov/gistemp/ . This request is made under the Data Quality Act.

Yours truly,

Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Monday, September 17, 2007 1:22 PM
To: Steve McIntyre
Cc: James E. Hansen
Subject: RE: Gistemp Changes

Dear Sir,

Thanks for bringing to our attention that the term "magnitude of effect" might be interpreted as "size" rather than "relevance", our obvious intent. We clarified our formulation correspondingly.

On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:
> Dear Sirs,
>
> I see that you have decided to report the change in methodology as
> requested in my previous email. While you should have reported the

> change in methodology when it was made, it is better late than never.
>
> In your new webpage, you state: " This August 2007 change received
> international attention via discussions on various blogs and
> repetition by some other media, with no graphs provided to show the
> magnitude of the effect." This is incorrect and I request that you
> correct this statement. On Aug 6, 2007, at Climate Audit,
> http://www.climateaudit.org/?p=1868 , the two graphs below were
> provided to estimate the magnitude of the effect. The first graph
> shown below estimated the impact on the U.S. temperature history at a
> little more than 0.15 deg C. Despite having no access to your source
> code, this proved to be an accurate estimate.
>
>
>
>
> The next graph shown below shows the distribution of changes over the
> 1221 U.S. stations, which are very substantial in individual cases.
> Despite your professed concern for illustrating the impact of changes,
> you did not yourself provide any graph to show the magnitude of the
> changes on individual stations, nor did you even provide explicit
> notice on your webpage that any changes had been made.
>
>
>
>
> Would you please correct the incorrect information on your webpage.
> This request is made pursuant to the Data Quality Act.
> Yours truly,
>
> Stephen McIntyre
>
>
>
>
>
>
>-----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre
> Cc: James E. Hansen
> Subject: Re: Gistemp Changes
>
>
> Dear Sir,
>
> As indicated in the description of our input files, we switched from
> the old year 2000 version of USHCN to the current version. The
> differences you noticed reflect corrections that were made by USHCN
> within the last six years.
>
>
> Reto A. Ruedy
>
>
> On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:
> > Dear Sirs, I notice that you've changed the historical data for some
> > US stations since Sep 7, 2007. In particular, I noticed that
> > temperatures for Detroit Lakes MN in the early part of the century

> > were reduced by nearly 0.5 deg C. These changes are subsequent to
> your
> > changes in August 2007 for the changing versions. To my knowledge,
> > there is no explanation for this most recent change and I was
> > wondering what the reason is.
> >
> >
> > Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes
> MN
> > and Aug 25, 2007 version.
> >
> > Thank you for your attention.
> >
> > Regards,
> >
> > Steve McIntyre
> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: US temperature correction graphic and file
From: [redacted]berkeley.edu>
Date: Sun, 12 Aug 2007 04:56:49 -0700
To: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, "Stephen McIntyre" <smcintyre [redacted] @ [redacted] ca>, [redacted] @itworks.com>, [redacted] @gmail.com>, "James Hansen" <jhansen@giss.nasa.gov>

In light of the recent fuss over the significance of the correction to the United States temperature record, I tracked down a copy of the data as it existed on August 1st (from MSN's search engine cache) and made a direct comparison (something that was largely lacking in much of the coverage of this issue).

I am distributing the comparison numbers and a graphic made from them to many of the principle commentators on this issue. Feel free to use and redistribute this at will, though I would appreciate an acknowledgment if you do so.

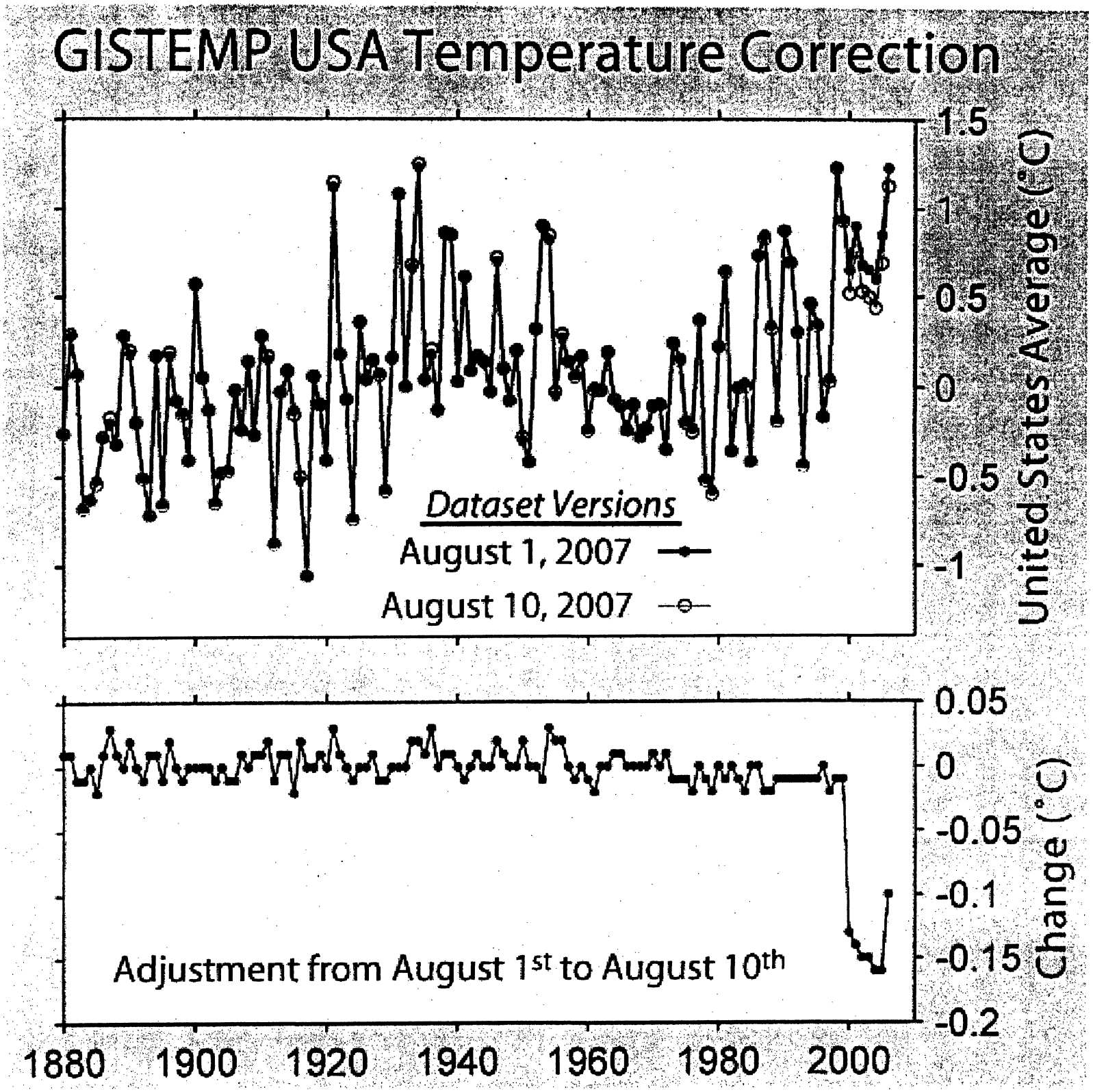
http://www.globalwarmingart.com/

Attachment Converted: "c:\program files\qualcomm\eudora\attach\usa_temp_correction.xls"
Attachment Converted: "c:\program files\qualcomm\eudora\attach\gistemp_correction.png"

	August 1, 2007		August 10, 2007		Difference	
	Annual	5-year	Annual	5-year	Annual	5-year
1880	-0.27		-0.26		0.01	
1881	0.28		0.29		0.01	
1882	0.08	-0.24	0.07	-0.24	-0.01	0
1883	-0.67	-0.29	-0.68	-0.3	-0.01	-0.01
1884	-0.63	-0.41	-0.63	-0.41	0	0
1885	-0.52	-0.46	-0.54	-0.46	-0.02	0
1886	-0.29	-0.39	-0.28	-0.39	0.01	0
1887	-0.2	-0.21	-0.17	-0.21	0.03	0
1888	-0.33	-0.07	-0.32	-0.06	0.01	0.01
1889	0.28	-0.05	0.28	-0.04	0	0.01
1890	0.18	-0.11	0.2	-0.11	0.02	0
1891	-0.2	-0.19	-0.2	-0.19	0	0
1892	-0.5	-0.22	-0.51	-0.21	-0.01	0.01
1893	-0.73	-0.39	-0.72	-0.38	0.01	0.01
1894	0.16	-0.31	0.17	-0.3	0.01	0.01
1895	-0.65	-0.23	-0.66	-0.22	-0.01	0.01
1896	0.17	-0.11	0.19	-0.1	0.02	0.01
1897	-0.08	-0.22	-0.08	-0.22	0	0
1898	-0.14	0.02	-0.15	0.03	-0.01	0.01
1899	-0.41	0	-0.41	0	0	0
1900	0.57	-0.01	0.57	-0.01	0	0
1901	0.05	-0.11	0.05	-0.11	0	0
1902	-0.13	-0.13	-0.13	-0.13	0	0
1903	-0.64	-0.33	-0.65	-0.34	-0.01	-0.01
1904	-0.48	-0.35	-0.48	-0.35	0	0
1905	-0.46	-0.37	-0.47	-0.37	-0.01	0
1906	-0.01	-0.21	-0.02	-0.21	-0.01	0
1907	-0.25	-0.17	-0.24	-0.17	0.01	0
1908	0.14	-0.03	0.14	-0.02	0	0.01
1909	-0.28	0.01	-0.27	0.02	0.01	0.01
1910	0.27	-0.11	0.28	-0.11	0.01	0
1911	0.15	-0.15	0.17	-0.15	0.02	0
1912	-0.87	-0.08	-0.88	-0.08	-0.01	0
1913	-0.04	-0.16	-0.03	-0.16	0.01	0
1914	0.08	-0.3	0.09	-0.29	0.01	0.01
1915	-0.13	-0.33	-0.15	-0.33	-0.02	0
1916	-0.52	-0.31	-0.5	-0.31	0.02	0
1917	-1.06	-0.35	-1.06	-0.35	0	0
1918	0.06	-0.41	0.06	-0.4	0	0.01
1919	-0.11	-0.08	-0.1	-0.07	0.01	0.01
1920	-0.41	0.17	-0.41	0.17	0	0
1921	1.12	0.14	1.15	0.15	0.03	0.01
1922	0.17	0.02	0.18	0.02	0.01	0
1923	-0.07	0.17	-0.07	0.17	0	0
1924	-0.73	-0.05	-0.74	-0.05	-0.01	0
1925	0.36	-0.05	0.36	-0.05	0	0
1926	0.04	-0.02	0.04	-0.02	0	0
1927	0.14	0.01	0.15	0.01	0.01	0
1928	0.08	-0.03	0.07	-0.03	-0.01	0
1929	-0.57	0.18	-0.58	0.18	-0.01	0

1930	0.16	0.15	0.16	0.15	0	0
1931	1.08	0.27	1.08	0.27	0	0
1932	0	0.63	0	0.63	0	0
1933	0.66	0.6	0.68	0.61	0.02	0.01
1934	1.23	0.42	1.25	0.44	0.02	0.02
1935	0.03	0.39	0.04	0.41	0.01	0.02
1936	0.18	0.43	0.21	0.45	0.03	0.02
1937	-0.13	0.35	-0.13	0.37	0	0.02
1938	0.85	0.36	0.86	0.36	0.01	0
1939	0.84	0.44	0.85	0.45	0.01	0.01
1940	0.03	0.49	0.03	0.49	0	0
1941	0.62	0.35	0.61	0.35	-0.01	0
1942	0.09	0.21	0.09	0.21	0	0
1943	0.16	0.2	0.17	0.19	0.01	-0.01
1944	0.14	0.21	0.14	0.22	0	0.01
1945	-0.03	0.21	-0.03	0.22	0	0.01
1946	0.7	0.17	0.72	0.17	0.02	0
1947	0.09	0.18	0.1	0.18	0.01	0
1948	-0.08	0.12	-0.08	0.13	0	0.01
1949	0.2	-0.1	0.2	-0.1	0	0
1950	-0.3	-0.05	-0.28	-0.05	0.02	0
1951	-0.42	0.14	-0.42	0.14	0	0
1952	0.32	0.27	0.32	0.27	0	0
1953	0.91	0.32	0.9	0.32	-0.01	0
1954	0.82	0.45	0.85	0.47	0.03	0.02
1955	-0.05	0.42	-0.03	0.43	0.02	0.01
1956	0.27	0.25	0.29	0.26	0.02	0.01
1957	0.14	0.12	0.14	0.13	0	0.01
1958	0.07	0.09	0.06	0.08	-0.01	-0.01
1959	0.17	0.03	0.17	0.02	0	-0.01
1960	-0.23	0	-0.24	-0.01	-0.01	-0.01
1961	0	0.02	-0.02	0.02	-0.02	0
1962	-0.02	-0.03	-0.02	-0.03	0	0
1963	0.19	-0.01	0.19	-0.01	0	0
1964	-0.08	-0.05	-0.07	-0.05	0.01	0
1965	-0.12	-0.07	-0.11	-0.07	0.01	0
1966	-0.24	-0.16	-0.24	-0.16	0	0
1967	-0.1	-0.19	-0.1	-0.19	0	0
1968	-0.28	-0.19	-0.28	-0.19	0	0
1969	-0.23	-0.17	-0.23	-0.16	0	0.01
1970	-0.12	-0.22	-0.11	-0.21	0.01	0.01
1971	-0.1	-0.11	-0.1	-0.11	0	0
1972	-0.36	-0.04	-0.35	-0.03	0.01	0.01
1973	0.25	-0.05	0.24	-0.05	-0.01	0
1974	0.16	-0.08	0.15	-0.08	-0.01	0
1975	-0.19	0.07	-0.2	0.06	-0.01	-0.01
1976	-0.23	-0.08	-0.25	-0.09	-0.02	-0.01
1977	0.37	-0.23	0.37	-0.24	0	-0.01
1978	-0.51	-0.15	-0.52	-0.16	-0.01	-0.01
1979	-0.58	0.03	-0.6	0.02	-0.02	-0.01
1980	0.22	-0.12	0.22	-0.12	0	0
1981	0.65	-0.01	0.64	-0.02	-0.01	-0.01

1982	-0.36	0.11	-0.36	0.1	0	-0.01
1983	0	-0.02	-0.01	-0.03	-0.01	-0.01
1984	0.02	-0.01	0	-0.01	-0.02	0
1985	-0.42	0.24	-0.42	0.22	0	-0.02
1986	0.73	0.3	0.73	0.29	0	-0.01
1987	0.85	0.26	0.83	0.25	-0.02	-0.01
1988	0.34	0.52	0.32	0.51	-0.02	-0.01
1989	-0.18	0.52	-0.19	0.5	-0.01	-0.02
1990	0.88	0.41	0.87	0.4	-0.01	-0.01
1991	0.7	0.26	0.69	0.25	-0.01	-0.01
1992	0.31	0.39	0.3	0.38	-0.01	-0.01
1993	-0.43	0.28	-0.44	0.27	-0.01	-0.01
1994	0.47	0.11	0.46	0.1	-0.01	-0.01
1995	0.35	0.06	0.34	0.05	-0.01	-0.01
1996	-0.17	0.39	-0.17	0.38	0	-0.01
1997	0.05	0.48	0.03	0.47	-0.02	-0.01
1998	1.24	0.54	1.23	0.51	-0.01	-0.03
1999	0.94	0.76	0.93	0.69	-0.01	-0.07
2000	0.65	0.88	0.52	0.79	-0.13	-0.09
2001	0.9	0.76	0.76	0.65	-0.14	-0.11
2002	0.68	0.69	0.53	0.55	-0.15	-0.14
2003	0.65	0.73	0.5	0.58	-0.15	-0.15
2004	0.6	0.8	0.44	0.66	-0.16	-0.14
2005	0.85		0.69		-0.16	
2006	1.23		1.13		-0.1	


GISTEMP USA Temperature Correction
1.5
1
0.5
0
-0.5
-1
United States Average (°C)
Dataset Versions
August 1, 2007
August 10, 2007
0.05
0
-0.05
-0.1
-0.15
-0.2
Change (°C)
Adjustment from August 1st to August 10th
1880
1900
1920
1940
1960
1980
2000

Subject: revisions to annual temps
From: Andrew Revkin <anrevk@nytimes.com>
Date: Thu, 09 Aug 2007 14:28:02 -0400
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov

hi,

you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.

were the revisions published yet, or are they updated in databases alone?

also, are you doing same for global mean temp or is this specific issue related to US?

ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: *The North Pole Was Here*
Amazon book: *The Burning Season*
Acoustic-roots band Uncle Wade

Subject: Re: revisions to annual temps
From: Andrew Revkin <anrevk@nytimes.com>
Date: Thu, 09 Aug 2007 23:42:50 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: gschmidt@giss.nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>

thanks.

on this front, i'm mainly intrsted in global mean temp trends in any case.,

just need to keep track.
in the meantime, more melting up north>
http://www.nytimes.com/2007/08/09/science/10cnd-arctic.html

At 11:34 PM 8/9/2007, James Hansen wrote:

> Hi Andy,
>
> This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.
>
> Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.
>
> The net effect averaged over the U.S. was an error of about 0.15C or less in the post-2000 years, well within the uncertainty bar that we give. The effect on the global mean was of the order of a thousands of a degree, i.e., entirely negligible.
>
> It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!
>
> Jim
> (Reto, please correct if there is anything in the above that is not right.)
>
> On 8/9/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:
>
> > hi,
> >
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Subject: Re: revisions to annual temps
From: Andrew Revkin <anrevk@nytimes.com>
Date: Fri, 10 Aug 2007 15:22:57 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: gmail.com, gschmidt@giss.nasa.gov, cdrar@giss.nasa.gov

hey jim,

given that quite a few folks (gore and some enviros particularly) have often used the USA temp trends in arguments for action (string of record years) it's hard for me to ignore the reanalysis of those annual temps -- even though my own focus remains global mean temp.

essentially, should people always have paid less attention to US (48 state) trend as a meaningful signal of AGW?
(now that all those earlier warm years intrude, it certainly makes the case that regional data can be a red herring)

happy to discuss briefly by phone.
or til 6 p.m. or so

At 11:34 PM 8/9/2007, you wrote:

> Hi Andy,
>
> This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.
>
> Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.
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>
> It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!
>
> Jim
> (Reto, please correct if there is anything in the above that is not right.)

On 8/9/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

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Subject: last question (promise)
From: Andrew Revkin <anrevk@nytimes.com>
Date: Fri, 24 Aug 2007 09:34:29 -0400
To: gschmidt@giss.nasa.gov, jhansen@giss.nasa.gov

one point McIntyre makes that has some seeming merit is that much of the misinterpretation and flaming over this could have been avoided if GISS had done the classic public-relations management move of getting out front on this instead of being reactive.

do you think you could have handled this better?

(or is he playing both sides by doing 'leaderboard' and then trying to be serious constructive auditor?)

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Acoustic-roots band Uncle Wade

Subject: Re: last question (promise)
From: Andrew Revkin <anrevk@nytimes.com>
Date: Fri, 24 Aug 2007 10:30:57 -0400
To: gschmidt@giss.nasa.gov
CC: jhansen@giss.nasa.gov

off record>

i never doubted the answer, but had to ask.
the spinup in blogosphere these days is instantaneous.

At 10:14 AM 8/24/2007, Gavin Schmidt wrote:

> Frankly that's c**p. None of the echo chambers that took this bothered to check anything with anybody (even McIntyre) before getting all hot and bothered (including your paper's own 'Opinionater' it should be pointed out). The idea that any actions by NASA would have made a difference is laughable.
>
> The error was corrected within 2 days and the notification made online and in an email. How does McIntrye think it could have been dealt with faster? Getting a press release put together requires weeks to get approval from HQ which would only have slowed the response. If we'd taken the time to do that, the accusation would have been of cover-up.
>
> This is just more spin.
>
> Gavin
>
> *----------*
> | Gavin Schmidt NASA/Goddard Institute for Space Studies |
> | 2880 Broadway |
> | Tel: (212) 678 5627 New York, NY 10025 |
> | |
> | gschmidt@giss.nasa.gov http://www.giss.nasa.gov/~gavin |
> *----------*
>
> On Fri, 24 Aug 2007, Andrew Revkin wrote:
>
> > one point McIntyre makes that has some seeming merit is that much of the misinterpretation and flaming over this could have been avoided if GISS had done the classic public-relations management move of getting out front on this instead of being reactive.
> >
> > do you think you could have handled this better?
> >
> > (or is he playing both sides by doing 'leaderboard' and then trying to be serious constructive

auditor?)

< http://www.nytimes.com/revkin>ANDREW C. REVKIN
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Amazon book: < http://www.islandpress.org/burning>The Burning Season
Acoustic-roots band < http://www.myspace.com/unclewade>Uncle Wade

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Subject: Re: US data
From: Andrew Revkin <anrevk@nytimes.com>
Date: Fri, 24 Aug 2007 16:02:44 -0400
To: rruedy@giss.nasa.gov
CC: @mailhub1.nytimes.com

Reto,

is there a simple way to determine which shifts are NOT statistically significant?

in graphic we're doing, i'd love to be able to indicate that (by shading or label or the like)

At 12:53 PM 8/24/2007, Reto Ruedy wrote:

> Dear Mr.Revkin,
>
> Below are the data you requested. We really should round (as some other groups do) to the nearest tenth of a degree rather than showing 2 digits.
>
> I tried to answer your question whether GISS ever showed a US table with 1934 warmer in the US than 1998 in an email to Jim. He found it confusing, so here is another attempt to answer it:
>
> the answer is "yes", all our publications and all previous tables had it that way, the table we put on our web on Jan 8, 2007 seems to have been the lone exception.
>
> Hope that is clearer.
>
> Sincerely,
>
> Reto
>
> Annual mean US temperature (degrees C)
> (anomalies with respect to 1951-1980)
>
> | Year | uncorrected | corrected |
> |---|---|---|
> | 1880 | -0.25 | -0.26 |
> | 1881 | 0.31 | 0.29 |
> | 1882 | 0.09 | 0.07 |
> | 1883 | -0.65 | -0.68 |
> | 1884 | -0.61 | -0.63 |
> | 1885 | -0.53 | -0.54 |
> | 1886 | -0.28 | -0.28 |
> | 1887 | -0.17 | -0.17 |
> | 1888 | -0.31 | -0.32 |
> | 1889 | 0.28 | 0.28 |
> | 1890 | 0.20 | 0.20 |

1891	-0.21	-0.20
1892	-0.50	-0.51
1893	-0.71	-0.72
1894	0.17	0.17
1895	-0.65	-0.66
1896	0.20	0.19
1897	-0.08	-0.08
1898	-0.14	-0.15
1899	-0.40	-0.41
1900	0.57	0.57
1901	0.06	0.05
1902	-0.13	-0.13
1903	-0.64	-0.65
1904	-0.48	-0.48
1905	-0.47	-0.47
1906	-0.02	-0.02
1907	-0.23	-0.24
1908	0.15	0.14
1909	-0.27	-0.27
1910	0.28	0.28
1911	0.17	0.17
1912	-0.88	-0.88
1913	-0.03	-0.03
1914	0.09	0.09
1915	-0.15	-0.15
1916	-0.50	-0.50
1917	-1.06	-1.06
1918	0.06	0.06
1919	-0.10	-0.10
1920	-0.41	-0.41
1921	1.14	1.15
1922	0.18	0.18
1923	-0.07	-0.07
1924	-0.74	-0.74
1925	0.36	0.36
1926	0.04	0.04
1927	0.15	0.15
1928	0.07	0.07
1929	-0.58	-0.58
1930	0.16	0.16
1931	1.08	1.08
1932	0.00	0.00
1933	0.68	0.68
1934	1.25	1.25
1935	0.04	0.04
1936	0.21	0.21
1937	-0.13	-0.13
1938	0.86	0.86
1939	0.85	0.85

1940	0.03	0.03
1941	0.61	0.61
1942	0.09	0.09
1943	0.17	0.17
1944	0.13	0.14
1945	-0.04	-0.03
1946	0.72	0.72
1947	0.09	0.10
1948	-0.08	-0.08
1949	0.20	0.20
1950	-0.28	-0.28
1951	-0.42	-0.42
1952	0.32	0.32
1953	0.90	0.90
1954	0.85	0.85
1955	-0.03	-0.03
1956	0.29	0.29
1957	0.14	0.14
1958	0.06	0.06
1959	0.17	0.17
1960	-0.24	-0.24
1961	-0.02	-0.02
1962	-0.02	-0.02
1963	0.19	0.19
1964	-0.07	-0.07
1965	-0.11	-0.11
1966	-0.24	-0.24
1967	-0.10	-0.10
1968	-0.28	-0.28
1969	-0.23	-0.23
1970	-0.11	-0.11
1971	-0.09	-0.10
1972	-0.35	-0.35
1973	0.24	0.24
1974	0.16	0.15
1975	-0.20	-0.20
1976	-0.25	-0.25
1977	0.37	0.37
1978	-0.52	-0.52
1979	-0.60	-0.60
1980	0.22	0.22
1981	0.64	0.64
1982	-0.36	-0.36
1983	-0.01	-0.01
1984	0.00	0.00
1985	-0.42	-0.42
1986	0.73	0.73
1987	0.83	0.83
1988	0.32	0.32

1989	-0.19	-0.19
1990	0.87	0.87
1991	0.69	0.69
1992	0.30	0.30
1993	-0.43	-0.44
1994	0.47	0.46
1995	0.35	0.34
1996	-0.17	-0.17
1997	0.04	0.03
1998	1.23	1.23
1999	0.94	0.93
2000	0.65	0.52
2001	0.90	0.76
2002	0.68	0.53
2003	0.65	0.50
2004	0.59	0.44
2005	0.85	0.69
2006	1.23	1.13

--
Reto Ruedy <rruedy@giss.nasa.gov>

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phone: 212-556-7326 fax: 509 -357-0965
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Acoustic-roots band Uncle Wade

Subject: Re: US data
From: Andrew Revkin <anrevk@nytimes.com>
Date: Sat, 25 Aug 2007 17:21:24 -0400
To: rruedy@giss.nasa.gov

thanks reto.
this is helpful.
the story (running tonite/sunday) stresses the importance of trend over year-to-year.

At 01:14 PM 8/25/2007, you wrote:

> Andrew,
>
> I'd like to add a few notes to yesterday's response:
>
> The estimate +-0.1C (+-0.2F) tries to account for gaps in spatial coverage and missing or erroneous reports as well as, for longer time periods, changes in instrumentation or even station location and reporting procedures (how to compute the reported daily mean).
>
> Given that the purpose of our effort is to compute long term trends, a simpler and more meaningful measure for the statistical significance is the interannual variability of the US means; its standard deviation is 0.8F (after subtracting the small linear trend). The corresponding number for the global means is 0.3F .
>
> To be remarkable, an observed change has to be a multiple of that standard deviation; compared to that, the errors caused by "bad" stations, urban heat island effect, etc. are of little importance.
>
> Reto
>
> On Fri, 2007-08-24 at 16:02 -0400, Andrew Revkin wrote:
> > Reto,
> >
> > is there a simple way to determine which shifts are NOT statistically
> > significant?
> >
> > in graphic we're doing, i'd love to be able to indicate that (by
> > shading or label or the like)
> >
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> > >
> > > Below are the data you requested. We really should round (as some
> > > other
> > > groups do) to the nearest tenth of a degree rather than showing 2
> > > digits.

> >
> > I tried to answer your question whether GISS ever showed a US table
> > with
> > 1934 warmer in the US than 1998 in an email to Jim. He found it
> > confusing, so here is another attempt to answer it:
> >
> > the answer is "yes", all our publications and all previous tables
> > had it
> > that way, the table we put on our web on Jan 8, 2007 seems to have
> > been
> > the lone exception.
> >
> > Hope that is clearer.
> >
> > Sincerely,
> >
> > Reto
> >
> > Annual mean US temperature (degrees C)
> > (anomalies with respect to 1951-1980)
> >
> > Year uncorrected corrected
> > 1880 -0.25 -0.26
> > 1881 0.31 0.29
> > 1882 0.09 0.07
> > 1883 -0.65 -0.68
> > 1884 -0.61 -0.63
> > 1885 -0.53 -0.54
> > 1886 -0.28 -0.28
> > 1887 -0.17 -0.17
> > 1888 -0.31 -0.32
> > 1889 0.28 0.28
> > 1890 0.20 0.20
> > 1891 -0.21 -0.20
> > 1892 -0.50 -0.51
> > 1893 -0.71 -0.72
> > 1894 0.17 0.17
> > 1895 -0.65 -0.66
> > 1896 0.20 0.19
> > 1897 -0.08 -0.08
> > 1898 -0.14 -0.15
> > 1899 -0.40 -0.41
> > 1900 0.57 0.57
> > 1901 0.06 0.05
> > 1902 -0.13 -0.13
> > 1903 -0.64 -0.65
> > 1904 -0.48 -0.48
> > 1905 -0.47 -0.47
> > 1906 -0.02 -0.02

>> 1907	-0.23	-0.24
>> 1908	0.15	0.14
>> 1909	-0.27	-0.27
>> 1910	0.28	0.28
>> 1911	0.17	0.17
>> 1912	-0.88	-0.88
>> 1913	-0.03	-0.03
>> 1914	0.09	0.09
>> 1915	-0.15	-0.15
>> 1916	-0.50	-0.50
>> 1917	-1.06	-1.06
>> 1918	0.06	0.06
>> 1919	-0.10	-0.10
>> 1920	-0.41	-0.41
>> 1921	1.14	1.15
>> 1922	0.18	0.18
>> 1923	-0.07	-0.07
>> 1924	-0.74	-0.74
>> 1925	0.36	0.36
>> 1926	0.04	0.04
>> 1927	0.15	0.15
>> 1928	0.07	0.07
>> 1929	-0.58	-0.58
>> 1930	0.16	0.16
>> 1931	1.08	1.08
>> 1932	0.00	0.00
>> 1933	0.68	0.68
>> 1934	1.25	1.25
>> 1935	0.04	0.04
>> 1936	0.21	0.21
>> 1937	-0.13	-0.13
>> 1938	0.86	0.86
>> 1939	0.85	0.85
>> 1940	0.03	0.03
>> 1941	0.61	0.61
>> 1942	0.09	0.09
>> 1943	0.17	0.17
>> 1944	0.13	0.14
>> 1945	-0.04	-0.03
>> 1946	0.72	0.72
>> 1947	0.09	0.10
>> 1948	-0.08	-0.08
>> 1949	0.20	0.20
>> 1950	-0.28	-0.28
>> 1951	-0.42	-0.42
>> 1952	0.32	0.32
>> 1953	0.90	0.90
>> 1954	0.85	0.85
>> 1955	-0.03	-0.03

>> 1956	0.29	0.29
>> 1957	0.14	0.14
>> 1958	0.06	0.06
>> 1959	0.17	0.17
>> 1960	-0.24	-0.24
>> 1961	-0.02	-0.02
>> 1962	-0.02	-0.02
>> 1963	0.19	0.19
>> 1964	-0.07	-0.07
>> 1965	-0.11	-0.11
>> 1966	-0.24	-0.24
>> 1967	-0.10	-0.10
>> 1968	-0.28	-0.28
>> 1969	-0.23	-0.23
>> 1970	-0.11	-0.11
>> 1971	-0.09	-0.10
>> 1972	-0.35	-0.35
>> 1973	0.24	0.24
>> 1974	0.16	0.15
>> 1975	-0.20	-0.20
>> 1976	-0.25	-0.25
>> 1977	0.37	0.37
>> 1978	-0.52	-0.52
>> 1979	-0.60	-0.60
>> 1980	0.22	0.22
>> 1981	0.64	0.64
>> 1982	-0.36	-0.36
>> 1983	-0.01	-0.01
>> 1984	0.00	0.00
>> 1985	-0.42	-0.42
>> 1986	0.73	0.73
>> 1987	0.83	0.83
>> 1988	0.32	0.32
>> 1989	-0.19	-0.19
>> 1990	0.87	0.87
>> 1991	0.69	0.69
>> 1992	0.30	0.30
>> 1993	-0.43	-0.44
>> 1994	0.47	0.46
>> 1995	0.35	0.34
>> 1996	-0.17	-0.17
>> 1997	0.04	0.03
>> 1998	1.23	1.23
>> 1999	0.94	0.93
>> 2000	0.65	0.52
>> 2001	0.90	0.76
>> 2002	0.68	0.53
>> 2003	0.65	0.50
>> 2004	0.59	0.44

> > 2005 0.85 0.69
> > 2006 1.23 1.13
> >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
>
>
> ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
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>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

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Subject: scrunched, but done
From: Andrew Revkin <anrevk@nytimes.com>
Date: Sat, 25 Aug 2007 21:27:44 -0400
To: thomas.r.karl@noaa.gov, jay.lawrimore@noaa.gov, jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov
CC: rruedy@giss.nasa.gov

well, in my highly imperfect universe of limited space, tried to cut thru the caricatures and focus on what is *not* in dispute.
not something i could ignore -- even after

http://www.nytimes.com/2007/08/26/us/26climate.html
thanks for your input.
on to more interesting issues.

tom, i didn't hear back on budget for the climate reference network.. is that on track?

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Amazon book: *The Burning Season*
Acoustic-roots band Uncle Wade

Subject: more mcintyre
From: gs210@columbia.edu
Date: Fri, 03 Aug 2007 13:21:38 -0400
To: rruedy@giss.nasa.gov

if you didn't see it:

http://www.climateaudit.org/?p=1854

There is something curious here though, why does 'GISS raw' go back to 'USHCN unadjusted' in 2000. Shouldn't it have stayed with USHCN+TOBS?

Gavin

PS. if this is all as it should be, we need to make clear the reasons why very quickly. Otherwise, the myth of the 'Hansen Y2k error' will be all around the place and once it's out, it won't go away.

Subject: Re: more mcintyre
From: gs210@columbia.edu
Date: Fri, 03 Aug 2007 18:37:17 -0400
To: rruedy@giss.nasa.gov
CC: jhansen@giss.nasa.gov

Thanks. That becomes clearer. I think that the suggestion you have for fixing it is a better idea than what is being done now, though possibly it might make more sense to correct the later GHCN data rather than the earlier USHCN numbers (that doesn't make a difference to the trend of course).

Gavin

Quoting Reto Ruedy <rruedy@giss.nasa.gov>:

> Gavin,
>
> In 2000, USHCN provided us with a product in which the US data were
> adjusted for changes in procedure/instrumentation to get a consistent
> time record. According to the description on their current website, 1999
> was their last comprehensive update of those data. Unlike the GHCN data,
> the USHCN data are not routinely kept up-to-date (at this point the seem
> to end in 2002).
>
> Under the assumption that the adjustments made the older data consistent
> with future data, we are replacing the US part of the GHCN data up to
> 1999 by the USHCN data that we got in 2000, thereby eliminating some
> known systematic biases in the early part of the US records.
>
> However, that assumption may not have been correct. I compared the 1999
> data in GHCN and USHCN. Indeed, in 490 of the 1057 stations the USHCN
> data were up to 1C colder than the corresponding GHCN data, in 77
> stations the data were the same, and in the remaining 490 stations the
> USHCN data were warmer than the GHCN data. The differences averaged out
> to 0.1 C, i.e. we may have introduced a +0.1C jump in 2000 over the US
> by our procedure.
>
> A more careful method would have been to compare the last few years of
> the USHCN data and the corresponding years of the GHCN data and adjust
> the USHCN data to fit the GHCN data. I'll add this procedure as an
> alternate to see what effect it would have.
>
> Reto

> On Fri, 2007-08-03 at 13:21 -0400, gs210@columbia.edu wrote:
> > if you didn't see it:
>
> http://www.climateaudit.org/?p=1854
>
> > There is something curious here though, why does 'GISS raw' go back
> > to 'USHCN unadjusted' in 2000. Shouldn't it have stayed with
> > USHCN+TOBS?
> >
> > Gavin
> >
> > PS. if this is all as it should be, we need to make clear the
> > reasons why very quickly. Otherwise, the myth of the 'Hansen Y2k
> > error' will be all around the place and once it's out, it won't go
> > away.

Subject: Re: GISS Raw Data
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: Mon, 6 Aug 2007 11:47:27 -0400 (EDT)
To: Reto Ruedy <rruedy@giss.nasa.gov>

I would suggest being more specific about what was assumed and what you will do now. The stats you had for the number of stations which had positive and negative offsets would be appropriate. You also might want to thank him for bringing this to our attention. The first because he'll ask you anyway or work it out himself, the second since it doesn't hurt to be gracious.

Gavin

Gavin Schmidt	NASA/Goddard Institute for Space Studies
	2880 Broadway
Tel: (212) 678 5627	New York, NY 10025
gschmidt@giss.nasa.gov	http://www.giss.nasa.gov/~gavin

On Mon, 6 Aug 2007, Reto Ruedy wrote:

> Jim,
>
> I've started to prepare a response to the email below. Steve is the person who appointed himself the auditor of all web sites and organizations that have to do with global warming in order to debunk this "hoax". He is maintaining a blog - a website called climate.audit.org, a site containing among justified concerns (caveats that we stress in all our papers) obvious fabrications and vicious attacks.
>
> I'll send you my suggestion for a response before mailing anything to Steve.
>
> Our simple combination of GHCN and USHCN data was based on the assumption that the correction made the older data consistent with the then current data. Unfortunately, that is not the case and an attempt to compute an offset based on the common years within say the 1990-1999 period would have been more appropriate.
>
> I am re-processing our current data with that modification and wait with finishing my response until we can look at the changes caused by it. I expect only a minor effect since the offsets average out to almost 0 over all USHCN stations.
>
> Reto
>
> On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:
> > Dear Sirs,
> >
> > In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.
> >
> > I am unaware of any mention of this change in procedure in any

published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?

In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention, Stephen McIntyre

Subject: Re: GISS Raw Data
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 07 Aug 2007 11:44:39 -0400
To: rruedy@giss.nasa.gov
CC: Jim Hansen <jhansen@giss.nasa.gov>

I would not engage further than simply dealing with the points at hand - it's just going to further the issue. Thus I would suggest the following text alone (a couple of minor edits and one new line):

=====

The basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence: "Input data for the analysis ,..., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

When we originally got the USHCN data, they ended in 1999 and as far as I know, no major corrections were implemented after that time. Unlike the GHCN data, the USHCN data is not a product that is kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend the USHCN data.

I agree with you that this simple procedure creates an artificial step in those cases where the correction was applied to the newest data, rather than bringing the older data in sync with the latest measurements - which would seem the natural way to go. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round.

Eliminating those artificial steps should have little impact even on the US temperature trend (much less the global trend), but it is a good idea to do so and I'd like to thank you for bringing this to our attention.

Starting with our next update (sometime later this week) an offset based on the last 10 years of overlap in the two data sets will be applied and our on-line documentation will be augmented correspondingly.

I tested the modification with the data now on display:
The table data (section 3 on the basic temperature site) differed occasionally by a 1 in the last digit (0.01 C). In the display most sensitive to that change - the US-graph of annual means - the warming decreased by about 0.15 C in the years 2000-2006.

You should perhaps note that your post 'Hansen's Y2K error' should really be titled Reto's Y2K error.

Respectfully,

etc...

======

Gavin

Subject: Re: revisions to annual temps
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 09 Aug 2007 15:04:44 -0400
To: Reto Ruedy <cdrar@giss.nasa.gov>, Jim Hansen <jhansen@giss.nasa.gov>

I was going to reply thusly, but let me know if you'd rather I left it to you.

Gavin

==========

Andy, this hasn't got much to do with me, but briefly, the issue was as follows. USHCN is a dataset just for the US which has included a number of appropriate corrections to the individual stations based on known site moves and changes in when the data was taken (there has been a shift towards taking data in the morning rather than in the afternoon over the decades). This data is not updated that frequently.

The main source of data is GHCN which is a global product, but that does not take into account the USHCN corrections.

The error was made in assuming that recent values of the GHCN and USHCN were the same. It turns out they weren't and so when the USHCN-corrected stations were extended to the present day using GHCN, there were a number of small jumps (of both sign) in the data. The correction that was put in was then to re-align the GHCN and USHCN data using the 1990-1999 data. This made approximately 0.15 deg C difference in the 2000-2006 period for the US mean, but it is negligible in the global mean. The data were reprocessed and the online values now incorporate that fix.

Given the nature of the error, this is purely a US issue (USHCN doesn't apply to the global data) , and as far as I'm aware, no further revisions related to this issue are likely to be forthcoming.

Gavin

On Thu, 2007-08-09 at 14:28, Andrew Revkin wrote:

> hi,
>
> you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.
>
> were the revisions published yet, or are they updated in databases alone?
>
> also, are you doing same for global mean temp or is this specific issue related to US?
>
> ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: The North Pole Was Here
> Amazon book: The Burning Season
> Acoustic-roots band Uncle Wade

Subject: Re: [Fwd: Fwd: Question]
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 09 Aug 2007 19:24:22 -0400
To: rruedy@giss.nasa.gov

agreed.

On Thu, 2007-08-09 at 19:12, Reto Ruedy wrote:

Gavin,

Jim gets many of these kinds of responses - a change whose effect we described as well within the margin of error has become an "astonishing change".

I guess the best thing is to ignore it and - if at all - set matters straight in a place like RealClimate .

Reto

-------- Forwarded Message --------
From: James Hansen <jhansen@giss.nasa.gov>
To: rruedy@giss.nasa.gov, makis@giss.nasa.gov
Subject: Fwd: Question
Date: Thu, 09 Aug 2007 18:13:23 -0400

DomainKey-Signature: a=rsa-sha1; q=dns; c=nofws; s=s1024;
d=yahoo.com;
h=Received:X-YMail-OSG:From:To:Subject:Date:Message-ID:MIME-Version:Content-Type:X-Mailer:Thread-Index:X-MimeOLE:Disposition-Notification-To;
b=ffkH2tg2tl5Z4nC6MwTIbe8N2agSXy0S+Mr4wPMswbQJdfchkU+64OU3se8vtx+Di6KFgNc1dgwzzbp5PDkotaOObRYkc+Usn1/0ugGm7gw8KnFEjITxLy9cc1DAIhnq4sSMIZyOj[illegible]
;
X-YMail-OSG:
kEot1KsVM111f1VC31qkqzwt1ok[illegible];UAnoXdfzY1j2A3q7Zk.gU1cYAwj5E.mbIWXbc97AenQB33NLMIg0vLabH2jPKs5nRtcb6PiL2mA--
From: [illegible]@yahoo.com>
To: <James.E.Hansen@nasa.gov>
Subject: Question
Date: Thu, 9 Aug 2007 18:55:53 -0300
X-Mailer: Microsoft Office Outlook 11
Thread-Index: Acfaz/NMEFUhL8W1T7+QO5t4TLtH8Q==

Dr. Hansen,

Below is a link to a posting today that I was hoping you could comment on.

It is dispiriting that questions regarding climate change have been politicized, but I was hoping you could shed some light on this posting.

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Thank you very much for any clarification you can provide.

Subject: Fig A2
From: gs210@columbia.edu
Date: Sat, 11 Aug 2007 10:26:04 -0400
To: rruedy@giss.nasa.gov

Reto, there are small (0.01) difference between the current Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt. Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these be reconciled to prevent any further confusion. I know it's small, but people are now looking very carefully. Thanks

Gavin

Subject: Re: Fig A2
From: gs210@columbia.edu
Date: Wed, 15 Aug 2007 15:00:19 -0400
To: rruedy@giss.nasa.gov
CC: Makiko Sato <makis@giss.nasa.gov>

One final quibble. In Fig A2, we now have the 5 year mean value for 2005 - which implies that 2007 data is being used in the calculation. But since 2007 isn't complete, that number will change by the end of the year. It might be cleaner not to calculate the that last value since it uses information that isn't seen (yet) in the annual average numbers.

Gavin

Quoting Reto Ruedy <rruedy@giss.nasa.gov>:

> Makiko,
>
> As you pointed out to me, if I keep 4 decimal places rather than 3,
> rounding to 2 digits will no longer be different than rounding directly
> to 2 digits (and I still have the 3rd digit if needed). So I will use 4
> digits for internal purposes in the future.
>
> Reto
>
> On Sun, 2007-08-12 at 18:53 -0400, Makiko Sato wrote:
> > OK, I updated all versions of Fig.A and Fig.A2 with newest data with
> > 3 digits after decimal, and manually typed in the table numbers to
> > match Reto's tables. Since I did manually, there may be some
> > mistakes. If you find some, please let me know.
> >
> > Makiko
> >
> > On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:
> > > Reto, there are small (0.01) difference between the current
> > > Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt.
> > > Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these
> > > be reconciled to prevent any further confusion. I know it's small,
> > > but people are now looking very carefully. Thanks
> > >
> > > Gavin

Subject: Re: FW: McIntyre Interview
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:45:47 -0400 (EDT)
To: "lesgiss@verizon.net" <lesgiss@verizon.net>
CC: rruedy@giss.nasa.gov, rschmunk@giss.nasa.gov, jhansen@giss.nasa.gov

Reto and Rob Schmunk have the details. He was using a robot to automatically download pages that robots weren't allowed to (because of the server demands of interactive scripts) and Rob blocked the IP. After a couple of emails back and forth, he was allowed to continue on weekends/evenings. The idea that this was anything personally directed at McIntyre or to prevent examination of the data is simply bogus.

Gavin

Gavin Schmidt	NASA/Goddard Institute for Space Studies
	2880 Broadway
Tel: (212) 678 5627	New York, NY 10025
gschmidt@giss.nasa.gov	http://www.giss.nasa.gov/~gavin

On Thu, 16 Aug 2007, lesgiss@verizon.net wrote:

> Hi to all:
>
> Dr. McIntyre gave an interview to an organization called TownHall.com in which he alleges that NASA blocked his IP address and that because of 1.5 million hits/month on his website, NASA retreated from its position. She wants to know if this is an accurate retelling of what occurred?
>
> The attachment is her ENTIRE 4 page interview which details in greater length the timeline and interactions with GISS....
>
> Thanks.
>
> Leslie
>
> Original Message:
> ----------
> From: Amanda Carpenter amanda.carpenter@townhall.com
> Date: Thu, 16 Aug 2007 11:11:31 -0400
> To: Leslie.M.McCarthy@nasa.gov
> Subject: McIntyre Interview
>
> Hi, Leslie.
> I've attached the complete version of the interview, but this is the part I was looking for comment on. Basically, I'd just like to know if this is true and explanation of what really went on here.
>
> Thanks!!!
>
> Here it is:
>
> McIntyre:I wrote to NASA in May and asked them for the source code for the

adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

This led to a bit of fight with NASA in May because as I started downloading the data in sequence they cut off my access to the data.

Q. Meaning, your computer?
They blocked my IP address.

Q. Why were they so opposed?

Well, first of all they probably werent used to, they dont have a very efficient distribution of the data so I ended up scraping the data off various web pages and I had written a computer program to do that. So, I was repetitively downloading data. Anyway, even after I was blocked and I explained myself they still didnt want to let me have access to the data. They just said go look at the original data. And I said no, I want to see the data you used. I know what the original data looks like. I want to see the data that you used. But one of the nice things about having a blog that gets a million and half hits a month is that I then was able to publicize this block in real-time and they very quickly withdrew their position and allowed me to have access.

Amanda Carpenter
National Political Reporter
Townhall.com
amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

Subject: Re: FW: McIntyre Interview
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:45:47 -0400 (EDT)
To: "lesgiss@verizon.net" <lesgiss@verizon.net>
CC: rruedy@giss.nasa.gov, rschmunk@giss.nasa.gov, jhansen@giss.nasa.gov

<x-flowed>

Reto and Rob Schmunk have the details. He was using a robot to automatically download pages that robots weren't allowed to (because of the server demands of interactive scripts) and Rob blocked the IP. After a couple of emails back and forth, he was allowed to continue on weekends/evenings. The idea that this was anything personally directed at McIntyre or to prevent examination of the data is simply bogus.

Gavin

Gavin Schmidt	NASA/Goddard Institute for Space Studies
	2880 Broadway
Tel: (212) 678 5627	New York, NY 10025
gschmidt@giss.nasa.gov	http://www.giss.nasa.gov/~gavin

On Thu, 16 Aug 2007, lesgiss@verizon.net wrote:

> Hi to all:
>
> Dr. McIntyre gave an interview to an organization called TownHall.com in which he alleges that NASA blocked his IP address and that because of 1.5 million hits/month on his website, NASA retreated from its position. She wants to know if this is an accurate retelling of what occurred?
>
> The attachment is her ENTIRE 4 page interview which details in greater length the timeline and interactions with GISS....
>
> Thanks.
>
> Leslie
>
> Original Message:
> ----------
> From: Amanda Carpenter amanda.carpenter@townhall.com
> Date: Thu, 16 Aug 2007 11:11:31 -0400
> To: Leslie.M.McCarthy@nasa.gov
> Subject: McIntyre Interview
>
> Hi, Leslie.
> I've attached the complete version of the interview, but this is the part I was looking for comment on. Basically, I'd just like to know if this is true and explanation of what really went on here.
>
> Thanks!!!
>
> Here it is:

McIntyre:I wrote to NASA in May and asked them for the source code for the adjustment software that they used to fix these stations and they refused to provide it. So I got interested in sort of looking at comparing the version of the temperature history of individual stations that NASA had against original data. I noticed that in some cases there was a very sharp jump in the differences between these two versions. The NASA version took a step in January 2000 relative to the original data. So, I then collected the data for both the NASA versions and the original data for all 1200 stages in the US historical network.

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Amanda Carpenter
National Political Reporter
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amanda.carpenter@townhall.com
blackberry
703-247-1226 x226 desk
home cell

</x-flowed>

Subject: Re: response on McIntyre IP claims??
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 16 Aug 2007 17:31:31 -0400
To: lesgiss@verizon.net
CC: Jim Hansen <jhansen@giss.nasa.gov>, @gmail.com, dcain@giss.nasa.gov, rruedy@giss.nasa.gov

a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.

gavin

On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:

> I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.
>
> Take a look at it...I'm also sending it to Reto and Gavin as well.
>
> Leslie
>
> Original Message:
> ---
> From: James Hansen jhansen@giss.nasa.gov
> Date: Thu, 16 Aug 2007 16:33:28 -0400
> To: lesgiss@verizon.net @gmail.com, dcain@giss.nasa.gov
> Subject: Re: response on McIntyre IP claims??
>
> Do we want to lower ourselves to debating with a court jester? Of course, that is what he wants.
>
> I don't have a strong preference as long as it is not taking a significant amount of my time.
>
> I have not read the stuff that you are referring to, but as I recall, as soon as I was told about the matter, I said that he was welcome to the data.
>
> Jim
>
> On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> > Hi Jim:
> >
> > Amanda Carpenter of Townhall.com has inquired if we will have a response to
> > McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.
> >
> > Thanks.
> >
> > Leslie
> >
> > ---
> > mail2web.com What can On Demand Business Solutions do for you?
> > http://link.mail2web.com/Business/SharePoint

---

mcintyre_isp_08-15-07.doc	**Content-Type:** application/msword **Content-Encoding:** base64

On May 16, 2007, an IP address attached to an address in the domain of Rogers Communications, a Canadian phone company and ISP made 16,000 attempts in several hours to scrape GISTEMP station data. The webmaster had noted that this large volume was dramatically slowing access to the site and data by other users. He identified that this activity was from an "automated" agent which, in rough parlance, is usually called a "robot". That address was blocked by the GISS webmaster as it violated rules from using web robots to access off-limits directories, particularly those with intereactive scripts. The webmaster had no idea of the identity of the user until Dr. McIntyre emailed the webmaster seeking clarification on why he was unable to ~~log in~~access the site. It should be noted that this was routine; denials of service have been made in the past under similar circumstances to other users as well.

Dr. McIntyre was then advised of the reason for his service denial and advised to contact the GISTEMP research group to explain data needs. On the 17th, Dr. McIntyre again inquired about his access and was again advised to contact the GISTEMP group. Dr. Reto Ruedy of the GISTEMP group contacted Dr. McIntyre to discuss his requests. Data on the GISS site is organized for users to view individual stations rather than for massive downloads and in an attempt to assist him, he was directed to NOAA's Global Historical Climatology Network (GHCN).

~~Some data providers insist that NASA GISS does not pass on their data and, as such, we are asked to refer requests to them, since they want to keep control of their own data. Dr. McIntrye's first request for "our code" came in the same email in which he thanked GISS for giving him full access to data. His request was so general that GISS had no idea what code he was talking about. Only after consulting his blog site was it learned that he was under the false impression that GISS has secret software that can "fix" faulty data. As NASA GISS does not have any such software, we were unable to honor his particular request.~~

Shortly after that email exchange, Dr. McIntyre was advised that he could again begin downloading provided that he accepted generally accepted protocols, i.e. doing so at times so as to not adversely affect other users (late nights, weekends, etc.). He replied "thank you for this. I will observe this condition."

Subject: Re: response on McIntyre IP claims??
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 16 Aug 2007 18:16:22 -0400
To: rruedy@giss.nasa.gov

the issue is here that you are dealing with a hostile interviewer. In such circumstances, it is much better simply to point out clear errors. If you open up another front they will dive on that instead and abandon all the previous positions (since they are not sincere in any case).

It does however highlight the rhetorical power of saying that the code is secret and things are being kept from the public. It may still be worth putting up a clean version of the adjustment program on the website in order to have something to point to in such cases.

gavin

On Thu, 2007-08-16 at 18:08, Reto Ruedy wrote:
> Gavin,
>
> So you don't think it is worth to point out that the whole first part of the interview section below is a total fabrication, and his first request for source code came with the "thank you" note mentioned at the end of the response, still May 17. Also, his reasons for our "reluctance" is wild speculation that is light years away from reality.
>
> On second thought, it's not worth going into these details, especially in a case where the interviewer is more likely to believe Steve than us.
>
> So, I'm fine with the edits.
>
> Reto
>
> On Thu, 2007-08-16 at 17:31 -0400, Gavin Schmidt wrote:
> > a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.
> >
> > gavin
> >
> > On Thu, 2007-08-16 at 17:11, lesgiss wrote:
> > > I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.
> > >
> > > Take a look at it...I'm also sending it to Reto and Gavin as well.
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> > > Leslie
> > >
> > > Original Message:
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> > > From: James Hansen jhansen@giss.nasa.gov
> > > Date: Thu, 16 Aug 2007 16:33:28 -0400
> > > To: lesgiss@verizon.net, [redacted]gmail.com, dcain@giss.nasa.gov
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>
> Amanda Carpenter of Townhall.com has inquired if we will have a response to
> McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.
>
> Thanks.
>
> Leslie
>
> ---
> mail2web.com What can On Demand Business Solutions do for you?
> http://link.mail2web.com/Business/SharePoint

---
mail2web.com Enhanced email for the mobile individual based on Microsoft® Exchange - http://link.mail2web.com/Personal/EnhancedEmail

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 17 Aug 2007 16:23:07 -0400
To: Jim Hansen <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, gavin@giss.nasa.gov

I didn't suggest using their urban adjustment, but that the most up-to-date USHCN data may have more in the way of documented station adjustments and more data earlier on. The FILIN data do not include their urban adjustment as far as I can tell. I get the impression from the USHCN web site that you should be able to extract just the TOBS corrected data without the FILIN.

The point is to make sure that the difference between the earlier USHCN data set we were using and the latest version does not make a significant difference to the results. Since any independent replication of the GISS procedure will use the currently available data set (not the one we are using), we should probably be ahead of the game in understanding what impact it has.

As is usual in these cases, the smarter of the court jesters have already stopped talking about 1934 and are now pushing the transparency 'meme'. That has a lot more resonance....

Gavin

On Fri, 2007-08-17 at 16:10, James Hansen wrote:
> What is the matter with the way that we do it? Among other things, we have a more realistic urban adjustment. Changing has various drawbacks. Jim
>
> On 8/17/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > Gavin suggested some time ago that we should do the analysis with the
> > current USHCN.
> >
> > I downloaded the "FILIN" USHCN data; the filled-in numbers are marked.
> > So I can use or ignore them. I have to write a program anyway to
> > reformat this file to the format used by GHCN. This includes the easy
> > conversion from F to C, but they also use a different set of ID-numbers
> > to characterize the station. So first, I'll have to construct and check
> > a conversion table to identify the stations properly.
> >
> > Reto
> >
> > On Fri, 2007-08-17 at 11:44 -0400, Reto Ruedy wrote:
> > > What I wrote was true last week - today it says that monthly data are
> > > available from 1900-2005. They must have updated it in the last few
> > > days.
> > >

> Reto
>
> On Fri, 2007-08-17 at 11:35 -0400, Reto Ruedy wrote:
> > Jim,
> >
> > On the USHCN site it says that the data available from their web site go
> > to 2002. I never downloaded them since the stage we use is not stored at
> > that site - we would have to make a special request.
> >
> > Reto
> >
> > On Fri, 2007-08-17 at 11:18 -0400, James Hansen wrote:
> > > Mc claims that USHCN data is actually available up-to-date. Is that
> > > right? Jim
> > >
> > > On 8/17/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> > > Good morning:
> > >
> > > Here is the Town Hall story entitled "NASA Blocked Climate
> > > Change Blogger
> > > from Data"...
> > >
> > >
> > > http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_c
> > >
> > > limate_change_blogger_from_data?page=full&comments=true
> > >
> > > Leslie
> > >
> > >
> > >
> > >
> > >
> > > ---
> > > mail2web.com - Microsoft® Exchange solutions from a leading
> > > provider -
> > > http://link.mail2web.com/Business/Exchange
> > >
> > >
> > >
> > >
> > >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: last question (promise)
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: Fri, 24 Aug 2007 10:14:53 -0400 (EDT)
To: Andrew Revkin <anrevk@nytimes.com>
CC: jhansen@giss.nasa.gov

<x-flowed>

Frankly that's c**p. None of the echo chambers that took this bothered to check anything with anybody (even McIntyre) before getting all hot and bothered (including your paper's own 'Opinionater' it should be pointed out). The idea that any actions by NASA would have made a difference is laughable.

The error was corrected within 2 days and the notification made online and in an email. How does McIntrye think it could have been dealt with faster? Getting a press release put together requires weeks to get approval from HQ which would only have slowed the response. If we'd taken the time to do that, the accusation would have been of cover-up.

This is just more spin.

Gavin

Gavin Schmidt	NASA/Goddard Institute for Space Studies
	2880 Broadway
Tel: (212) 678 5627	New York, NY 10025
gschmidt@giss.nasa.gov	http://www.giss.nasa.gov/~gavin

On Fri, 24 Aug 2007, Andrew Revkin wrote:

> one point McIntyre makes that has some seeming merit is that much of the misinterpretation and flaming over this could have been avoided if GISS had done the classic public-relations management move of getting out front on this instead of being reactive.
>
> do you think you could have handled this better?
>
> (or is he playing both sides by doing 'leaderboard' and then trying to be serious constructive auditor?)
>
>
>
>
> <http://www.nytimes.com/revkin>ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: <http://nytimes.com/learning/globalwarming>The North Pole Was Here
> Amazon book: <http://www.islandpress.org/burning>The Burning Season
> Acoustic-roots band <http://www.myspace.com/unclewade>Uncle Wade

</x-flowed>

Subject: Re: new USHCN 1880-2005
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 27 Aug 2007 16:39:45 -0400
To: rruedy@giss.nasa.gov
CC: Jim Hansen <jhansen@giss.nasa.gov>, gavin@giss.nasa.gov, makis@giss.nasa.gov, Thomas.R.Karl@noaa.gov

but did 1934 and 1998 swap places? ●

gavin

On Mon, 2007-08-27 at 16:37, Reto Ruedy wrote:

> Hi Jim,
>
> Over the weekend, I used the newest version of the USHCN data to redo our analysis; I did it twice, with and without the data USHCN filled in.
>
> No surprises; between 1920 and 2005 the change in the US ann. means was less than 0.02 C, the largest difference was in the 1880's (<0.16 C). With the new data, the US trend will be slightly higher.
>
> The only interesting thing was, that my first attempt to process these data failed. It turned out that our program could not handle the attempt to remove data that were not present.
>
> All went fine when I took the US stations off our list of manual corrections.
>
> It seems that all our manual deletions of parts of USHCN data were also either deleted or modified in the new USHCN data. Their more rigorous purging of odd-looking beginnings of station records seems to be the main reason for the changes.
>
> I suggest, we switch to the new USHCN data for future updates. It does not matter much to keep or not to keep USHCN fillers; not keeping them is a little more in line of what we did so far.
>
> Reto

Subject: Re: new USHCN 1880-2005
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 27 Aug 2007 17:14:58 -0400
To: rruedy@giss.nasa.gov

that's one less thing to worry about!

I wouldn't recommend changing the format - any such such change is bound to be interpreted as an attempt to spin the numbers.

I take it that the 2006, 2007 numbers from GHCN are offset so that there is no discontinuity when going from USHCN to GHCN as you did for the post 2000 numbers in the last analysis?

If and when Jim decides to adopt this, I also recommend that we have a specific page outlining the change and the differences it makes so that there is no accusation that we're quietly fiddling the numbers.

thanks,

Gavin

On Mon, 2007-08-27 at 17:04, Reto Ruedy wrote:
> No - but I needed an extra digit to decide that question (1.244 vs 1.238C). Maybe, we'll switch to a single digit in the US-table, then we have 3 years in the number 1 position.
>
> Reto
>
> On Mon, 2007-08-27 at 16:39 -0400, Gavin Schmidt wrote:
> > but did 1934 and 1998 swap places? ●
> >
> > gavin
> >
> > On Mon, 2007-08-27 at 16:37, Reto Ruedy wrote:
> > > Hi Jim,
> > >
> > > Over the weekend, I used the newest version of the USHCN data to redo our analysis; I did it twice, with and without the data USHCN filled in.
> > >
> > > No surprises; between 1920 and 2005 the change in the US ann. means was less than 0.02 C, the largest difference was in the 1880's (<0.16 C). With the new data, the US trend will be slightly higher.
> > >
> > > The only interesting thing was, that my first attempt to process these data failed. It turned out that our program could not handle the attempt to remove data that were not present.
> > >
> > > All went fine when I took the US stations off our list of manual corrections.
> > >
> > > It seems that all our manual deletions of parts of USHCN data were also either deleted or modified in the new USHCN data. Their more rigorous purging of odd-looking beginnings of station records seems to be the main reason for the changes.
> > >
> > > I suggest, we switch to the new USHCN data for future updates. It does not matter much to keep or not to keep USHCN fillers; not keeping them is a little more in line of what we did so far.

Subject: Re: WSJ.com - Commentary: Not So Hot
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
Date: 30 Aug 2007 12:41:47 -0400
To: rruedy@giss.nasa.gov
CC: lnolan@giss.nasa.gov

WSJ op-ed's are completely separate from the journalism side. They are also insane.

Gavin

On Thu, 2007-08-30 at 12:40, Reto Ruedy wrote:

> Is this an editorial ? If so, they disregarded their Aug 16 article written by their scientific consultant Keith Winstein.
>
> They also repeat Steve's inane comparison of a warming of .21 C/86 years (or .21 C for the 1920-2006 period) to the .15 C temperature correction - the 2 quantities don't even have the same units (like comparing 2 miles to 2 miles/hour). Based on the corrected numbers, the 1920-2006 warming now agrees with the reported .21 C (that number probably came from NOAA). Based on the uncorrected data it would have been .27 C for that period - but nobody here ever computed or cared for it, much less publicized it.
>
> Reto
>
> PS. I'd rather not talk to any journalist at this point. Did Gavin or Jim respond ?
>
> On Thu, 2007-08-30 at 07:19 -0700, lnolan@giss.nasa.gov wrote:
>
> > WSJ.com
> >
> > Powered
> > by
> >
> > * Please note, the sender's email
> > address has not been verified.
> >
> > Thought you would
> > be interested in
> > this...Leslie
> >
> > Click the following to access the
> > sent link:

WSJ.com - Commentary: Not So Hot*

This article will be available to non-subscribers of the Online Journal for up to seven days after it is e-mailed.

SAVE THIS link FORWARD THIS link

Get your EMAIL THIS Browser Button and use it to email information from any Web site.

*This article can also be accessed if you copy and paste the entire address below into your web browser.
http://online.wsj.com/wsjgate?subURI=%2Farticle%2FSB118835472067611877-email.html&nonsubURI=%2Farticle_email%2FSB118835472067611877-lMyQjAxMDE3ODM4MDMzNTA0Wj.html

Subject: Fwd: Re: Sea Level Rise, Green Greenland & Fantabulous Inference
From: Lonnie Thompson <thompson.3@osu.edu>
Date: Tue, 28 Aug 2007 11:43:24 -0400
To: jhansen@giss.nasa.gov
CC: dcain@giss.nasa.gov

<x-flowed>
Hi Jim: Understand you have had a busy summer. I had a few issues I would like to touch base with you on.

(1) Concerns telephone call with Ralph Cicerone concerning Steve McIntyre, data request and tactics.

(2) Would like to get you to Ohio State in 2008 to give the Bownocker Lectures. We are pretty open on times. The lectures are scheduled
on Thursday but any Thursday between Feb. 21and March 6th or between March 27 and May 8th would work. There are two lecture:
one at 4:00 PM which is more technical and a public lecture a 8:00 PM. These would be in our new School of Earth Sciences.
All expenses would be paid and there is a $1000.00 honorarium. More important, I know how busy you are and the toll that lectures take.

Hope you can fit us in your busy schedule next spring. Appreciate very much what you do in getting the message to the public.
Please let me know if you can fit this into your schedule.

You can telephone my direct line:

Best wishes,

Lonnie

</x-flowed>

Subject: Re: Re: Sea Level Rise, Green Greenland & Fantabulous Inference
From: Lonnie Thompson <thompson.3@osu.edu>
Date: Tue, 28 Aug 2007 13:47:49 -0400
To: James Hansen <jhansen@giss.nasa.gov>

<x-flowed>
Hi Jim: Good talking with you. I will give to two possible dates for the Bownocker lecture, April 24, 2008 or May 1st, 2008. Please let me know what works for you and I will get it on the Academic calendar.

Thanks again!

Lonnie

At 12:27 PM 8/28/2007, you wrote:

> Hi Lonnie,
>
> O.K., I am trying to avoid commitments because I am so far behind on things, but it would be good to see you again. Let's make it near the end of the periods you mention, i.e., at the beginning of May.
>
> Will try to call you now.
>
> Jim
>
> On 8/28/07, Lonnie Thompson <<mailto:thompson.3@osu.edu>thompson.3@osu.edu> wrote:
> Hi Jim: Understand you have had a busy summer. I had a few issues I would like to touch base with you on.
>
> (1) Concerns telephone call with Ralph Cicerone concerning Steve McIntyre, data request and tactics.
>
> (2) Would like to get you to Ohio State in 2008 to give the Bownocker Lectures. We are pretty open on times. The lectures are scheduled on Thursday but any Thursday between Feb. 21and March 6th or between March 27 and May 8th would work. There are two lecture:
> one at 4:00 PM which is more technical and a public lecture a 8:00 PM.
> These would be in our new School of Earth Sciences.
> All expenses would be paid and there is a $1000.00 honorarium. More important, I know how busy you are and the toll that lectures take.
>
> Hope you can fit us in your busy schedule next spring. Appreciate very much what you do in getting the message to the public.
> Please let me know if you can fit this into your schedule.
>
> You can telephone my direct line:
>
> Best wishes,
>
> Lonnie

</x-flowed>

Subject: Washington Times
Date: Mon, 13 Aug 2007 13:28:05 -0400
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Thread-Topic: Washington Times
Thread-Index: AcfduDO3iWFMNxtcQNO49lb0gQRgpgAFsm7w
From: "Thompson, Tabatha (HQ-NB000)" <Tabatha.Thompson-1@nasa.gov>
To: "McCarthy, Leslie M. \(GSFC-130.0\)" <leslie.m.mccarthy@nasa.gov>,
<lesgiss@verizon.net>, "Stephen Cole" <scole@pop600.gsfc.nasa.gov>,
"David Herring" <dherring@climate.gsfc.nasa.gov>,
"Campion, Edward S. \(GSFC-130.0\)" <edward.s.campion@nasa.gov>,
"Buis, Alan D. \(JPL-1871\)[JPL]" <alan.d.buis@nasa.gov>
X-OriginalArrivalTime: 13 Aug 2007 17:29:45.0965 (UTC) FILETIME=[8AC789D0:01C7DDCF]

All –
Can any of you help me find the place on the NASA site to which he's referring? I need to get back to a reporter, so I'd love any help I can get. Our HQ scientists aren't familiar with any change. Thanks!
Tabatha

From: Dunbar, Brian (HQ-NB050)
Sent: Monday, August 13, 2007 10:43 AM
To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
Subject:

http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1012/commentary

Not sure what web site he's referring to.

bd

Subject: FW: Per our Discussion - Note for Web Site
Date: Wed, 15 Aug 2007 14:24:47 -0400
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Thread-Topic: Per our Discussion - Note for Web Site
Thread-Index: AcffUvLWPvj/zV+jRyyyM7BaAf2nZAAACTFgAABm1pAABTO80A==
From: "Thompson, Tabatha (HQ-NB000)" <Tabatha.Thompson-1@nasa.gov>
To: "McCarthy, Leslie M. \(GSFC-130.0\)" <leslie.m.mccarthy@nasa.gov>
X-OriginalArrivalTime: 15 Aug 2007 18:24:48.0594 (UTC) FILETIME=[90203B20:01C7DF69]

How does this look to you?

From: Thompson, Tabatha (HQ-NB000)
Sent: Wednesday, August 15, 2007 11:57 AM
To: Kaye, Jack A. (HQ-DK000)
Subject: Per our Discussion - Note for Web Site

Jack,
Per our discussion, please review the following statement. Once I hear from you, I'll send it to our web people.
ttt
Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record based on corrected data. The computer modeling program that generated the temperature record was produced with the assumption that data from monitoring stations would be adjusted to account for changes such as the time of day at which measurements were made. However, the adjusted data were not always readily available and the program used data from monitoring stations that had not been adjusted. The result was a discontinuity in temperature variance in 2000. The researchers have corrected the computer program and posted their revised data. More information is available here: (LINK TO GISS SITE).

Subject: FW: All in a Good Cause
From: ' @sympatico.ca>
Date: Thu, 02 Aug 2007 12:59:37 +0000
To: baird.j@parl.gc.ca, gallac@parl.gc.ca, dramsay.mpp.kirklandlake@liberal.ola.org, jhansen@giss.nasa.gov, johnyakabuski@pc.ola.org, mharris@cfra.com

---

From: *FOS Extracts <fosextracts@shaw.ca>*
Reply-To: *FOS Extracts <fosextracts@shaw.ca>*
To: *<Undisclosed-Recipient:;>*
Subject: *All in a Good Cause*
Date: *Wed, 01 Aug 2007 16:50:44 -0600*

MERIDIAN MAGAZINE

All in a Good Cause

By Orson Scott Card

Editor's note: This article first appeared in The Rhinoceros Times *of Greensboro, North Carolina, and is used here by permission.*

Here's a story you haven't heard, and you should have.

An intelligence source, working for a government agency. He's not a spy, he's an analyst. He uses computers to crunch numbers and at the end of his work, out pops the truth that was hiding in the original data. Let's call him "Mann."

The trouble with Mann is, he has an ideology. He knows what he wants his results to be. And the original numbers aren't giving him that data. So the agency he works for won't be able to persuade people to fight the war he wants to fight.

Well, that's not acceptable.

Cooking the Figures

He starts with his software. There are certain procedures that are normal and accepted in his line of work. But if he makes just one little mistake, his program does a weird little recursion and if there's any data at all that shows the pattern he wants it to show, it will be magnified 139 times, so it far overshadows all the other data.

He can run it on random numbers and it gives him the shape he wants. Unfortunately, the real-world numbers aren't random — they have a very different shape. All the numbers. Even his jimmied program won't give the results he wants.

All he needs is any data shaped the right way. And so he looks a little farther, and ... here it is. It looks, on the surface, like all the other data that he's been working with. Other researchers working in his field, just glancing at it, will assume it is, too.

But it isn't. Because the source that gathered this batch of data had some other key information that takes it all away. The numbers don't mean what they normally mean. In fact, this number set is absolutely false.

If you use these numbers along with all the other data, however, the clever little program will pick them up, magnify them radically, and voilá! The final report shows exactly the shape he needs the numbers to have.

The trouble is, these numbers are supposed to be double-checked. Anybody who looks closely at his numbers

and at his program will see what he's done. It's not hard to find, if you have the original data sets and can examine the program. He will be exposed as a fraud. It will do his cause more harm than good, if it's made public.

But he's not afraid. He knows how this works.

He doesn't show the program or the lists of his data sources to anybody.

Second, he is given a big boost by the fact that another researcher — we'll call him "Santer" — had his own axe to grind. He was also the author of a questionable report and got himself appointed to a position that allowed him to get to the final report before it's published, delete all statements about how "there is no way to reach a definitive conclusion," and replace them with his own conclusion, which is absolute.

And it works. Santer's report is accepted, even though it has since been proven false. Mann's report continues to be relied on, and no one questions it. The government agency issues the report which they know has been altered to fit preconceived conclusions.

Vast sums of money are expended on the basis of what he claims to have found. People's live are put at risk.

Mann and Santer didn't do it for the money, though grants do flow in their direction.

They did it for the cause. It's a noble cause. And even though the data don't actually say what they wanted them to say — in fact, they say the opposite — they are untroubled by that. Because the government actions that are being taken are the Right Thing.

Santer and Mann are true believers. They don't need evidence. Evidence is just something you create to persuade other people.

Here's the amazing thing about Mann's original report: He's not the only researcher working in this field. In fact, it's the job of many hundreds of researchers to refuse to accept his data at face value. After all, his findings disagree with everyone else's. Before they accept his results, they have a duty to look at his software, look at his data, and try to duplicate his results.

But nobody does it. Not a soul.

Nor, when it goes public, does anyone in the press check the results — because they want him to be right, too.

Steve the Canadian Businessman

Not until a Canadian businessman — let's call him "Steve" — took a look at the stats and got curious. Now, it happens that Steve is in the mining business; he also happened to be a prize-winning math student in college. He knows how to read number sets. He knows what good analysis looks like.

He also knows what cooked figures look like. He has seen the phony projections that companies use when they're trying to swindle people. Their results are too perfect. Mann's report looks too perfect, too.

So Steve starts digging. First, he read's Mann's original report. He finds it an exercise in obscurity. From what he published, it's very, very hard to tell just what statistical methods Mann used, or even what data he operated on.

This is wrong — it's not supposed to be that way. Scientists are supposed to leave a clear path so other people can follow them up and replicate their research.

The fact that it's so obscure suggests that Mann does not want anyone checking his work.

But Mann used government grants in his research. Which means he has an obligation to disclose. Steve contacts him, asks for the information. He gets a runaround. He gets pointed to a website that does not have the information. He tries again, and again gets a runaround — in fact, Mann sends him a very rude letter saying that

he will no longer communicate with him.

Why should he? Steve isn't a legitimate researcher in that field. He's just a businessman.

But Steve is now sure there's something fishy going on, and he doesn't give up. He gets other people to help him. Finally they are pointed to a different website, where, to their surprise, they find that someone has accidentally left a copy of the FORTRAN program that was used to crunch the numbers. It wasn't supposed to be where Steve found it — which is why it hadn't been deleted.

Also, there was a little more carelessness — there is a set of data labeled "censored." Steve can't see, right away, what's significant about it, except that a score or so of data sets are left out of the censored data.

Steve looks at the program. He finds the glitch rather easily. He tries the program on random numbers and realizes that it always yields the distinctive shape that has caused all the stir.

Sorting out the data sets is much harder. He contacts a lot of people. He does what anyone checking these figures would have to do, and he realizes: If anyone had tried to check, a lot of this information would already have been put together.

He realizes: I am the first person ever to attempt to verify these astonishing, anomalous, politically hot results. Out of all the researchers in this field who had a responsibility to do "due diligence" before accepting the data, none of them has done it.

Finally he has all the original data put together. It includes more than just real numbers — it includes "extrapolated" data, which means that sometimes, where there were holes, Mann just made the numbers up and plugged them in. This is sloppy and lazy — but it's just the beginning.

What's crucial is that Steve now understands why the "censored" data sets are smaller than the ones Mann used. The full source data includes those misleading results that shouldn't have been used. But the "censored" data sets leave it out.

This means that Mann knew exactly what he was doing. This was not an accident. Mann ran the program on the data without the misleading numbers, and then he ran it with the misleading numbers. What he published was the results that made his ideological case.

Where's the Press?

This story is true.

Anybody who cares to can verify the story. In fact, one of the leading science journals was prepared to publish Steve's results. But then, before publication, they kept cutting back and cutting back on the amount of space they would let Steve's report take up in the journal.

Finally the space they were going to allot was so small that they concluded Steve could not tell his story in that number of words, and therefore they decided not to publish it at all.

Meanwhile, serious publications did publish Mann's savage response to what Steve was saying on the website where he was putting up his results for everyone to read.

Notice: Steve is making all his work transparent to the world — anyone is free to check his data.

Mann is still hiding, denying, attacking — but not providing the full information. You still have to do detective work to ferret it out.

Now, if you were a reporter — you know, those brave guys and gals who are committed, body and soul, to "the public's right to know" — wouldn't you smell a rat? Wouldn't you jump on the chance to expose such an obvious fraud?

After all, there are now governments all over the world basing their decisions on Mann's false report. Crucial decisions are being made. Schoolchildren are being terrorized with dire projections of what will happen if Mann's report is not believed and acted upon. Vast sums of money are being spent. People are treating Mann's cause as a crusade — and his fake results are the chief weapon they use to prove their case.

Where's the press? Why am I able to tell you this story in full confidence that very few who are reading it will have ever heard it before?

Because Mann doesn't report to the Bush administration. The government agency for which the result was filed was a UN agency — specifically, the Intergovernmental Panel on Climate Change.

And Mann's report is the famous "hockey stick" that "proves" that global warming not only is happening, but right now we're in the warmest climate period in the past thousand years.

Ah! You've heard of that report, haven't you! The press has been all over that one! Your kids are being taught about it in school!

You have friends who look at you like an idiot or the scum of the earth if you don't get energized by it, frightened by it, determined to act on that information. Don't you care about the future of the environment?

Why haven't you joined the cause? Why doesn't the Bush administration act to save the world from the most terrible threat imaginable?

It's like the opening of the "Talk of the Town" section of the February 12th *New Yorker*: "Except in certain benighted precincts — oil-industry-funded Web sites, the Bush White House, Michael Crichton's den — no one wastes much energy these days trying to deny global warming."

This statement is not just false, it's stupidly false. It speaks of such deep ignorance at *The New Yorker* — ignorance that they're actually proud of — that it makes one despair, for this is a magazine that once prided itself on knowing what it was talking about.

"By the time the IPCC publishes an assessment, it has been vetted by thousands of scientists," says The New Yorker — but we know that in fact nobody vetted the Mann paper, and nobody checked Santer except, of course, Santer — while he went ahead and removed statements of some of those "thousands of scientists" (p. 27).

In other words, whoever wrote this *New Yorker* piece did not check. He or she just spouted.

What is really being said here is, "We believe in the IPCC and anybody else who supports Global Warming. We believe it so much that we refuse to listen to anybody who says otherwise."

The only difference between this and Jim and Tammy Baker on the old PTL Club is that nobody says "Jesus." It's all faith, no science.

They're like four-year-olds putting their fingers in their ears and chanting "La la la la" until the person talking to them goes away.

The Hockey Stick Hoax should be a scandal as big as the discovery of the Piltdown Man Hoax. Bigger, really, since so much more is at stake.

But because the media are dominated by True Believers, they are doing everything they can to maintain the hoax, to keep the public from learning the truth.

What were those bad numbers Mann plugged in to get his fake results? Modern bristlecone pine tree-ring data in which recent tree rings showed the widths that would normally mean unusually warm weather.

However, these trees were located near temperature recording stations that showed lower than usual temperatures. So instead of being a sign of warmer temperatures, the tree rings are actually responding to the increased CO2 levels.

Even the heading on this bristlecone pine study clearly stated that the wider tree rings did not indicate higher temperatures. But Mann plugged them in as if they did, producing the one dataset that showed "warmer weather" (i.e., wider tree rings) in recent years, allowing the defective software to produce its hockey-stick result.

The bristlecone pine study was real science. Mann's use of it was deliberately fraudulent.

How Can We Know What's True?

All this can be checked. I didn't even change the names. "Mann" is Michael Mann; his co-writers on that hockey stick report are Raymond Bradley and Malcolm Hughes. "Steve" is Stephen McIntyre, and the writer of the report I'm working from is Ross McKitrick, who is a climate scientist. Their report is a chapter in *Shattered Consensus: The True State of Global Warming,* edited by Patrick J. Michaels.

Do you know how True Believer scientists respond to this? Just like the ignorant New Yorker writer. There's no attempt to answer any specific charge. They simply dismiss any disagreement by saying, "All the smart scientists agree that global warming is happening; anybody who denies it is just a crank, and you should ignore them."

This is exactly the kind of bias that President Bush's enemies accuse him of having during the run-up to the Iraq War. They claim that Bush and his people only believed the intelligence reports that told them what they wanted to hear, and ignored the rest, claiming that "everybody knew" things that were false.

That's not what happened with Bush (but you don't actually have to prove accusations against President Bush these days). But with the Hockey Stick Hoax it can be proved — yet the very same reporters pay no attention at all. It's "not a story."

In other words, the very people who attack Bush as a liar are actually behaving exactly as they accuse Bush of behaving.

Global Warming vs. Climate Change

If you pay close attention, you'll find that Global Warming alarmists are not actually saying "Global Warming" lately. No, nowadays it's "Climate Change." Do you know why?

Because for the past three years, global temperatures have been falling.

Oops.

The thing is, we've had twenty years since the Alarmists first raised the banner of Global Warming. They told us that "If This Goes On" by 2010 or 2020, sea levels will be rising so high that coastal cities will be flooded, famines will cover the earth, and ...

Oh, you know the list. They're still making the same predictions — they just move the dates farther back.

It's like those millennarian religious cults in the 1800s. Religious leaders would arise who would predict the Second Coming of Christ in 1838. When Christ didn't oblige them by showing up, they went back to their visions or scripture calculations or whatever they claimed and report that they miscalculated, now it was going to be 1843. Or whatever.

Here's the raw truth:

All the computer models are wrong. They have not only failed to predict the future, they can't even predict that past.

That is, when you run their software with the data from, say, the 1970s or 1980s, and project what should happen in the 1990s or 2000s, they project results that have absolutely nothing to do with the known climate data for those decades.

In other words, the models don't work. The only way to make them "work" is to take the known results and then fiddle with the software until it finally produces them. That's not how honest science is done.

Why are so many scientists so wrong?

First of all, there aren't all that many scientists. You hear about how "everybody" agrees about global warming. But who is "everybody"?

I had somebody at a conference get very angry with me for even raising a question. "I have a friend who's a climate scientist and he says that the Everglades are definitely drying up!"

But that's not the question, I said. Global warming isn't even the question. The question is, what is causing global warming or cooling or climate change? Is it human carbon dioxide emissions or something else? Your friend is studying aquifers in one specific area. In what way is he qualified to speak about global climate?

The only answer I got was the answer you always get when you challenge the roots of someone's religion — fury, dismay, and a refusal to talk about it any more.

That's what happens over and over. Who are the scientists who are qualified to speak? There aren't that many. It's the relatively few scientists who are studying paleoclimate and those who are working on contemporary data collection and collation and analysis.

And here's where it almost gets funny. Even the IPCC, which was so heavily biased in favor of Global Warming alarmism, could not get its pet scientists to agree that Global Warming in recent decades is even probably caused by human activity.

What Is Driving Global Climate?

Science isn't done by consensus. It's done by rigorous testing. When a hypothesis — or a computer model — fails to correspond to the actual real-world data, you throw them out

That's what the real climate scientists are doing. They have found, in recent years, a very close correspondence between global climate and variations in the amount of radiation the Earth receives from the Sun.

The light and heat we get varies depending on the distance and position of the Earth and the amount of radiation the Sun puts out. The Earth's distance and position seem to determine the big cycles — the Ice Ages — and the Sun's variations seem to determine the smaller climate cycles.

We have historical data indicating several global warm periods. There was one during the heyday of the Roman Empire; then there was a global cooling during the Dark Ages (beginning about 600 A.D.) The Medieval Warming kicked in about 950, followed by the Little Ice Age beginning about 1300.

The Little Ice Age ended in about 1860. You'll notice that most reports on our modern Global Warming set that as their base point, and leave out all prior warmings.

But those warm periods are real, as are the cool periods. Ice core samples from various places around the world back it up, as do ocean floor samples. In fact, the predictions based on the 1500-year (approximately) solar cycle are borne out everywhere.

There's now at least as much real-world evidence supporting the solar cycle as the cause of climate variation — including all of today's climate variation — than there was for, say, tectonic plates or the asteroid-caused extinctions at the time when they were first plastered all over the media as the hottest science news of their day.

It's not that it's really a secret. The book *Unstoppable Global Warming* by Singer and Avery tells us what the media could easily have reported to us:

"On 16 November 2001, the journal *Science* published a report on elegant research, done by unimpeachable scientists, giving us the Earth's climate history for the past 32,000 years — along with our climate's linkage to the sun" (p. 8).

They quote Richard Kerr of Science:
... the climate of the northern North Atlantic has warmed and cooled nine times in the past 12,000 years in step with the waxing and waning of the sun.
And Kerr quotes glaciologist Richard Alley of Penn State:
The ... data are sufficiently convincing that [solar variability] is now the leading hypothesis to explain the roughly 1,500-year oscillation of the climate seen since the last ice age, including the Little Ice Age of the 17th century (p.8).
We're not talking about fly-by-night wackos. We're talking about leading scientists doing solid research.

And other scientists have found data that correlates closely with their findings all over the world. In other words, these solar oscillations account, completely, for the global variations.

The opposite is the case with the Global Warming alarmists. Their human-emitted carbon dioxide hypothesis is made ludicrous by the fact that most of the warming since the 1860s occurred before 1940, an era when human CO2 emissions were not significant. And we had significant global cooling between then and 1970, precisely the period when CO2 emissions were steeply rising.

CO2 really is rising, though. Any greenhouse heat effect seems to be dissipated by a newly discovered "Pacific Heat Vent." Moreover, CO2 emissions are provably involved in fertilizing vegetation wherever CO2 levels have risen.

Global Warming "Solutions"

We can't stop global warming or cooling. We simply don't have the power to do it. We can't heat up or cool down the sun; we can't jiggle the Earth in its orbit or change its position. We'd be idiots to try, even if such unimaginable powers came within our reach.

So we'll continue, as long as the human race persists, to have ice ages and warm periods, with relatively minor oscillations (like the Little Ice Age and our current warm period) in between.

In fact, what we have right now, while we are not yet as warm as the peak of the Medieval Warming (a fact that Mann and others have tried to deny or obscure), is a superb climate that is making life better for people all over the world. It's the cold periods that cause famines and population drops, and promote plagues and floods.

We should be grateful.

Instead we are being hit with dire warnings, every one of which is either false or a normal part of the Earth's history; our business should be to adapt to the unavoidable solar-caused warming, not to destroy the worldwide economy in order to prevent something that human activity is not causing.

Because the "solutions" proposed by the alarmists do not solve anything — and they admit it! The drastic proscriptions of the Kyoto Protocols, even if anybody were actually following them, would not have had any effect on Global Warming, even if it had been caused by human CO2 emissions.

Do you understand that? When Al Gore goes on and on about what we must do to save the Earth, he knows — and everybody involved with the Global Warming alarmist movement knows — that none of their drastic proposals would have the slightest effect on Global Warming even if it worked they way their fantasies say it does.

So why do they propose it? There are many personal motives, of course, but when you look at the non-solution "solutions" they propose, the pattern is clear: They are not trying to stop global warming. They are trying to punish the Western democracies for being richer than the rest of the world.

There are solutions to that problem (and I believe it is a problem), but they involve stabilizing bad governments, increasing international trade, and making unsafe parts of the world safer so they can take part in the global boom.

Not only that, but many of the programs the alarmists advocate are actually needed for completely unrelated reasons. It is a mark of our folly and blindness that we continue to be so ridiculously oil-dependent all these years after the oil embargo of 1973.

For national security, environmental, futuristic, and personal-happiness reasons we should be working hard to change our automobile centered culture into more civilized patterns that invariably make people happier wherever they are tried.

It can't be done by cutting back on automobile emissions or even by raising taxes on gasoline — especially because these changes are hardest on the poor and the marginal middle class.

But I'll write about how and why we need to cut back on our destructive love affair with that faithless mistress, the car, in another column.

What matters right here and now is that it is time for the world's scientists to apostatize from the Church of Global Warming. It is a false religion. It is based on lies, and its leading prophets know that it is because they're the ones faking the data or stretching it to ridiculous lengths to pretend that the real world hasn't already ruled against their claims.

It is time for our school systems to stop accepting the gospel of that false religion and start doing their due diligence. Our children should be taught about the demonstrable solar cycles and the whole human-caused Global Warming theory, along with the Hockey Stick Hoax, should be taught only as another example, after Piltdown Man and pre-Copernican theories of planetary movement, of how science can be corrupted when ideology gets ahead of the data.

It is time for us to laugh at the ideologues who try to pretend that any criticism of Global Warming alarmism is idiotic and unscientific. They are the ones who ignore the data; they are the ones who believe on faith alone, without evidence; and, most important, they are the ones who are trying to stifle the opposition without answering it.

The Global Warming alarmists are the anti-science religion that is trying to forcibly indoctrinate and convert everyone while suppressing dissent. And the news media are their patsies, their stooges, their puppets.

Right now, let's start demanding that whenever the local newspaper or TV stations say anything about Global Warming, they back it up with actual data that takes into account the solar oscillations, the real climate history of the earth, and the facts about what CO2 actually does in the atmosphere.

It's time to stop letting them lie pass along other people's lies. It's time for the news media to stop doing cocktail party "research" and dig down into the science and get it right.

Read It for Yourselves

I could not possibly array all the evidence here; you must read the books for yourself. *Unstoppable Global Warming* is a highly accessible book written for ordinary educated readers. It's the book I recommend most highly.

Shattered Consensus, on the other hand, uses the language of various disciplines of science to a degree that makes some chapters fairly difficult for untrained readers, though the key chapter I cited here, on the Hockey Stick Hoax, is quite readable and worth looking at by everybody.

S. Fred Singer and Dennis T. Avery, *Unstoppable Global Warming: Every 1,500 Years.*

Patrick J. Michaels, ed. *Shattered Consensus*: The *True State of Global Warming*.. (See especially: Ross McKitrick, "The Mann et al. Northern Hemisphere 'Hockey Stick' Climate Index: A Tale of Due Diligence," pp. 20-49.)

Subject: Fw: CCNet: 138/2007 - 21 Augt ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT
From: @sympatico.ca>
Date: Mon, 27 Aug 2007 13:04:30 +0000
To: baird.j@parl.gc.ca, jhansen@giss.nasa.gov, leader@greenparty.ca

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From: *FOS Extracts <fosextracts@shaw.ca>*
Reply-To: *FOS Extracts <fosextracts@shaw.ca>*
To: *<Undisclosed-Recipient:;>*
Subject: *Fw: CCNet: 138/2007 - 21 Augt ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT*
Date: *Sun, 26 Aug 2007 18:39:08 -0600*

Subject: CCNet: ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT

CCNet 138/2007 - 21 August 2007 -- Audiatur et altera pars

ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT

Canadian scientists studying ice core records are questioning current theories about the rapid cooling of the Northern Hemisphere 8,200 years ago. Many scientists link that event with the final drainage of Lake Agassiz, a large glacial lake that once covered much of central Canada. The drainage is thought to have freshened waters in the northern Atlantic Ocean, slowing the oceanic circulation that helps distribute heat. The researchers found the lake's drainage occurred between 8,500 and 8,350 years ago and that sea-surface and deep-current conditions determined from oceanic sediment cores lack significant concurrent changes in the northern Atlantic.
--United Press International, 20 August 2007

PREDICTING climate change is a tricky business, so thank heavens for computer programmes that can take a melting ice sheet here and an El Niño effect there and turn it into a recipe for disaster. But not so fast, says Lenny Smith, a statistician at the London School of Economics who is concerned by the "naïve realism" of climate modelling. Smith singles out the British Government's UK Climate Impacts Programme and the Met Office for making detailed climate projections for regions of the UK when the global models vary widely. Policymakers "think we know more than we actually know. We need to be more open about our uncertainties", Smith says.
--The Times, 21 August 2007

Recently a friend mentioned that he was concerned about health effects from wi-fi. I pointed out that this was likely an overblown concern, fed by the media echoes of a scare mongering BBC Panorama program, and pointed him at the coverage at Ben Goldacre's blog "Bad Science" for a through takedown of the whole issue. To my surprise he came back more worried than ever. He had watched the program on the Bad Science page, but not looked very much at the damning criticism surrounding it. After all, a warning is much more salient than a critique. My friend is highly intelligent and careful about his biases, yet fell for this one.
--Anders Sandberg, Overcoming Bias, 20 August 2007

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(1) ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT
United Press International, 20 August 2007

(2) LAKE AGASSIZ FINAL DRAINAGE EVENT IN THE NORTHWEST NORTH ATLANTIC
C. Hillaire-Marcel et al., GEOPHYSICAL RESEARCH LETTERS, VOL. 34, 2007

(3) OPINION: THE JURY IST STILL OUT ON GLOBAL WARMING
Jeff Jacoby, International Herald Tribune, 20 August 2007

(4) OPINION: EUROPE'S CARBON CON JOB
Kyle Wingfield, The Wall Street Journal, 21 August 2007

(5) "POLICYMAKERS THINK WE KNOW MORE THAN WE ACTUALLY KNOW"
The Times, 21 August 2007

(6) HANSEN AND THE "DESTRUCTION OF CREATION"
Steve McIntyre, Climate Audit, 20 August 2007

(7) MEDIA RISK BIAS FEEDBACK
Anders Sandberg, Overcoming Bias, 20 August 2007

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(1) ANOTHER PALAEO-CLIMATE DISASTER MYTH IN DOUBT

United Press International, 20 August 2007
http://www.physorg.com/news106846404.html

Canadian scientists studying ice core records are questioning current theories about the rapid cooling of the Northern Hemisphere 8,200 years ago.

Many scientists link that event with the final drainage of Lake Agassiz, a large glacial lake that once covered much of central Canada. The drainage is thought to have freshened waters in the northern Atlantic Ocean, slowing the oceanic circulation that helps distribute heat.

Canadian scientists C. Hillaire-Marcel and Anne de Vernal of the University of Quebec and McGill University, along with David Piper of the Geological Survey of Canada, studied oceanic records downstream from Lake Agassiz's flood discharge route.

The researchers found the lake's drainage occurred between 8,500 and 8,350 years ago and that sea-surface and deep-current conditions determined from oceanic sediment cores lack significant concurrent changes in the northern Atlantic.

Instead, the scientists said the data show the 8,200-year-old cooling event was generated by several factors, including melting of North American continental glaciers and a subsequent rapid sea level rise that induced a large-scale reorganization of broad oceanic circulation patterns.

The study appears in the journal Geophysical Research Letters.

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(2) LAKE AGASSIZ FINAL DRAINAGE EVENT IN THE NORTHWEST NORTH ATLANTIC

GEOPHYSICAL RESEARCH LETTERS, VOL. 34, L15601, 2007
http://www.agu.org/pubs/crossref/2007/2007GL030396.shtml

Lake Agassiz Final drainage event in the northwest North Atlantic

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Abstract
The 8.2 ka "climate" event recorded in Greenland ice cores is subject of debates with respect to causal linkage with a collapse of the Atlantic Meridional Overturning due to the drainage of the late-glacial lake Agassiz. Here, we present records from the NW North Atlantic, down-current the flood discharge route, showing that the 9.5-8 ka interval was marked by a succession of events. The drainage itself corresponds to a twin-layer of carbonate-rich turbidites deposited

within the calibrated 8.35-8.5 ka interval. Proxies of sea-surface and deep-current conditions do not indicate significant concomitant changes in the NW North Atlantic. The dataset, however, supports the concept that the 8.2 ka "climate" event may represent one of the manifestations of climate instability during an interval with major changes of land drainage in NE America, due to the collapse of the Laurentide Ice Sheet, subsequent fast sea level rise and large scale reorganization of the North Atlantic thermohaline circulation pattern.
Received 8 May 2007; accepted 3 July 2007; published 2 August 2007.
Keywords: NW North Atlantic; early Holocene; Lake Agassiz.

FULL PAPER at http://www.agu.org/pubs/crossref/2007/2007GL030396.shtml

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(3) OPINION: THE JURY IST STILL OUT ON GLOBAL WARMING
The best widely read daily English language paper in Europe - Ed
International Herald Tribune, 20 August 2007
http://www.iht.com/articles/2007/08/20/opinion/edjacoby.php

By Jeff Jacoby

If there's anything climate-change crusaders are adamant about, it is that the science of the matter is settled. That greenhouse gases emitted through human activity are causing the planet to warm dangerously, they say, is an established fact; only a charlatan would claim otherwise.

In the words of Al Gore, America's leading global warming apostle: "There's no more debate. We face a planetary emergency. . . . There is no more scientific debate among serious people who've looked at the evidence."

But as with other claims Gore has made over the years ("I took the initiative in creating the Internet"), this one doesn't mesh with reality.

Scientists and other "serious people" who question the global warming disaster narrative are not hard to find. ... Plainly, the science isn't settled. It changes all the time.

FULL COMMENT at http://www.iht.com/articles/2007/08/20/opinion/edjacoby.php

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(4) OPINION: EUROPE'S CARBON CON JOB

The Wall Street Journal, 21 August 2007
http://online.wsj.com/article/SB118764555108003341.html

By KYLE WINGFIELD

With all the supposed truths out there about global warming, here's one that doesn't get reported very often. Europe isn't the climate-change champion that its leaders, and their American apologists, would have you believe.

It's true that emissions -- both in absolute terms and on a per capita basis -- remain higher in America than in the EU-15 (the countries that belonged to the European Union before its 2004 expansion, and which are widely used as a comparison for the U.S. when the subject is global warming). And when it comes to decrying the planet's impending doom and making grand gestures about preventing this, Europe is second to none.

Let's assume, though, for argument's sake, that most Americans believe global warming is a real danger, that carbon dioxide is public enemy No. 1, and that the only question is what to do about it. Before following Europe's lead in adopting a cap-and-trade system or mandatory renewable energy targets, wouldn't you want to know that those actions will lead to something better than the status quo?

So would I. And the numbers show that if America is the Great Carbon Satan, Europe is certainly no angel.

Since 2000, emissions of CO2 have been growing more rapidly in Europe, with all its capping and yapping, than in the U.S., where there has been minimal government intervention so far. As of 2005, we're talking about a 3.8% rise in the EU-15 versus a 2.5% increase in the U.S., according to statistics from the United Nations.

What's more, preliminary data indicate that America's CO2 output fell by 1.3% from 2005 to 2006. If these numbers hold up, it would mean U.S. emissions growth is nearly flat so far this decade. Europe hasn't yet released figures for last year, but it did report in June that emissions from the participants in its carbon-trading scheme, which account for almost half of Europe's CO2 production, rose slightly in 2006.

The news gets worse for Europe when you consider that during this decade, the U.S. population has grown at roughly double the rate of the EU-15 while the American economy has been expanding about 40% faster. It seems Europe is becoming less efficient in its carbon production while U.S. efficiency is improving.

Now, few people -- this writer included -- would look at these statistics and conclude that Europe should necessarily adopt America's more passive approach. When you talk about CO2 emissions during this decade, or even go back to the globally accepted "base year" of 1990, you're working with a small sample size. And there really isn't much difference between a change of 3.8% and one of 2.5%. So why would the U.S. instead want to adopt Europe's policies?

As a measure of the gap between Europe's rhetoric and its reality, nothing beats its emissions trading scheme. The idea is that CO2-intensive companies -- chiefly those that produce power or use a great deal of it -- receive a certain number of permits to emit the gas. If they reduce their emissions and end up with a surplus, they can sell the extra permits to firms needing more allowances. In this way, market mechanisms are supposed to punish or reward companies for their carbon output, encouraging them to reduce it in the long run.

In Europe, however, the "market" consists of demand that government has created artificially and -- more important -- supply that the state distributes arbitrarily. Not surprisingly, companies lobbied hard to ensure favorable allocations when trading began in 2005. The number of permits exceeded actual emissions and prices plummeted. Today, allowances for 1,000 tons of CO2 are priced at about 11 euro cents, hardly high enough to prod a company to cut its carbon instead of just buying more permits. If you think the U.S. Congress -- whether led by Democrats or Republicans -- would be more likely to shun special interests in the name of environmentalism, then I've got some tariff-free Brazilian ethanol to sell you.

Brussels claims it's correcting the system for the next trading period, which runs from 2008 to 2012, but a number of holes will remain. For instance, it's expected that companies will be able to buy permits outside the EU from other countries and then import them to cover their needs. A large influx of permits could depress prices in the same way that the EU's own overallocation did the first time around. That's particularly true if third countries are lax in their issuance of permits.

"These [non-EU] credits have already been exposed as highly flawed, and often fraudulent," Max Andersson, a Green member of the Swedish Parliament, wrote this month in a study for the think tank Open Europe. "They don't always reflect absolute reductions in emissions, whilst many of these credits are generated from projects in developing countries that would have happened anyway." The result, he concludes, is that emissions might not fall but rise.

Another potential problem: An energy-industry source says that, in many EU member states, the allocation will likely be done in a way that gives sufficient permits to most of the firms that use a lot of energy, leaving a shortage for electricity producers. There might be some logic in that -- instead of relying on manufacturers to reduce their energy consumption, power companies would have more of an incentive to produce electricity in a way that doesn't create as much carbon in the first place.

It would only work, though, as long as the power companies didn't buy additional permits and pass the cost along to customers instead of investing in real carbon-cutting measures. It would require competition to keep them from that temptation, though, and there's the rub: The main players in large markets like France and Germany are still effectively insulated from rivals and can set prices as they wish. Brussels has been trying for years to create a pan-European energy market, but it may be the better part of a decade before it's finished.

European policy makers have plenty of motivation to goad Washington into going along with their approach before too many people realize it isn't working. At a summit in March, EU national leaders dramatically raised the stakes by pledging a 20% cut in CO2 emissions by 2020. That's a real laugher considering their scant chances of meeting their Kyoto commitment of 8% by 2012. Their move is best seen as a bluff intended to pressure the U.S. into the game. Here in Europe, the grand gesture is always the most appealing play.

Mr. Wingfield is an editorial-page writer for The Wall Street Journal Europe.

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(5) "POLICYMAKERS THINK WE KNOW MORE THAN WE ACTUALLY KNOW"

The Times, 21 August 2007
http://www.timesonline.co.uk/tol/life_and_style/career_and_jobs/public_sector/article2294475.ece

Just how accurate are our weather-prediction models?

PREDICTING climate change is a tricky business, so thank heavens for computer programmes that can take a melting ice sheet here and an El Niño effect there and turn it into a recipe for disaster. But not so fast, says Lenny Smith, a statistician at the London School of Economics who is concerned by the "naïve realism" of climate modelling.

"Our models are being over-interpreted and misinterpreted," he told a conference organised by the British Antarctic Survey in Cambridge. "They are getting better; I don't want to trash them per se. But as we change our predictions, how do we maintain the credibility of the science? We need to drop the pretence that they are nearly perfect."

Smith singles out the British Government's UK Climate Impacts Programme and the Met Office for making detailed climate projections for regions of the UK when the global models vary widely.

Policymakers "think we know more than we actually know. We need to be more open about our uncertainties", Smith says.

But that's not to say that there's any good news on climate change, New Scientist (Aug 18) reports.

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(6) HANSEN AND THE "DESTRUCTION OF CREATION"

Climate Audit, 20 August 2007
http://www.climateaudit.org/?p=1946

By Steve McIntyre

Hansen has followed up his "Lights Out Upstairs" outburst with another outburst dismissing critics as "court jesters" with whom he will have no truck. His new jeremiad re-iterated the position of NASA spokesman Gavin Schmidt that U.S. errors "didn't matter" because the U.S. was only 2% of the earth's surface. Today I'll take a look back at Hansen et al 1999 and, especially Hansen et al 2001, the latter entitled "A closer look at United States and global surface temperature change" and being entirely devoted to coaxing a few-tenths of temperature change out of the U.S. record, a matter now said to be unimportant. Hansen also linked interest in the NASA computer programming errors to somehow acquiescing in the "destruction of Creation".

Hansen's Recent Jeremiads

Hansen has a collection of his recent jeremiads online here. On August 10, 2007, shortly after NASA had changed their online data for over 1200 US HCN stations and for their U.S. temperature history, Hansen sent an email to reporters and others saying:

"Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. ... My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem, though."

As I will show below, Hansen himself thought otherwise in Hansen et al 2001 - an article which is devoted to nothing but this topic. Hansen's most recent epistle is well worth reading. The proximate occasion of this latest letter is Hansen's "Y2K" error. He says in the letter (but not at the NASA website) that the flaw affected temperatures in the U.S. "by about 0.15 deg C... only in 2000 and later" and that they patched the program, "thanked the fellow who pointed it out and thought that was the end of it."

Hansen says that he will not "joust" with his critics, who he regards as mere "court jesters", since "Creation" itself is at stake:

"if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important."

It's as though Hansen, who grew up in the 1930s and 1940s, has a Jor-El complex: Jor-El being familiar to young boys of

a certain age as Superman's father who (per Wikipedia):

""was a highly respected scientist on the planet Krypton before its destruction. He foresaw the planet's fate, but was unable to convince his colleagues in time to save their race. Jor-El was, however, able to save his infant son, Kal-El, sending him in a homemade rocketship to the planet Earth just moments before Krypton's demise."

FULL COMMENT at http://www.climateaudit.org/?p=1946

==========

(7) MEDIA RISK BIAS FEEDBACK
Don't we know it - Ed
Overcoming Bias, 20 August 2007
http://www.overcomingbias.com/2007/08/media-risk-bias.html

Anders Sandberg

Recently a friend mentioned that he was concerned about health effects from wifi. I pointed out that this was likely an overblown concern, fed by the media echoes of a scare mongering BBC Panorama program, and pointed him at the coverage at Ben Goldacre's blog Bad Science for a through takedown of the whole issue.

To my surprise he came back more worried than ever. He had watched the program on the Bad Science page, but not looked very much at the damning criticism surrounding it. After all, a warning is much more salient than a critique. My friend is highly intelligent and careful about his biases, yet fell for this one.

There exists a feedback loop in cases like this. The public is concerned about a possible health threat (electromagnetic emissions, aspartame, GMOs) and demand that the potential threat is evaluated. Funding appears and researchers evaluate the threat. Their findings are reported back through media to the public, who update their risk estimates.

In an ideal world the end result is that everybody get better estimates. But this process very easily introduces bias: the initial concern will determine where the money goes, so issues the public is concerned about will get more funding regardless of where the real risks are. The media reporting will also introduce bias since the media favour reporting newsworthy news, and risk tends to cause greater interest than reports of no risk (or the arrival of reviews of the state of the knowledge). Hence studies warning of a risk will be overreported compared to risks downplaying it, and this will lead to a biased impression of the total risk. Finally, the public will have an availability bias that makes them take note of reported risks more than reported non-risks. And this leads to further concerns and demands for investigation.

Note that I leave out publication bias and funding bias here. There may also be a feedback from the public to media making media report things they estimate the public would want to hear about. These factors of course muddy things further in real life but mostly seem to support the feedback, not counter it.

FULL COMMENT at http://www.overcomingbias.com/2007/08/media-risk-bias.html

==========

Subject: Annual Mean Temperature Station Data
From: @hotmail.com>
Date: Tue, 28 Aug 2007 07:00:47 -0500
To: <rruedy@giss.nasa.gov>

I am interested in obtaining monthly temperature data for all stations in the world in one ASCII file. Right now, the only way I see to get that is to download the monthly text data from each station by going through http://data.gissnasa.gov/gistemp/station_data/ .

Is there a way to obtain this information in one large file?

Thanks,

Subject: Problem with data access
From: @hotmail.com>
Date: Wed, 29 Aug 2007 09:14:16 -0500
To: <rruedy@giss.nasa.gov>

I tried to access the binary files at ftp://data.giss.nasa.gov/pub/gistemp/download/ using SBBX__to_1x1.f without success. I am on Windows XP, using gfortran compiler. Please advise if you have any suggestions.

Thanks,

Here is the output with the ITEST file as the input.

```
rename (link) Ts_anom_file to TS_DATA if ocnflag=0or2
 rename (link) SST_anom_file to SST_DATA if ocnflag>0
      ocn-flag: 0 no ocn, 1 ocn only, 2 ocn+land
 enter: month(1-12) year (1880-?) ocn-flag(0-2)
 data type and source:
 GHCN V2 TemperatureANOM (C)  CR 1200KM       1880-present
     393216
   16777216
  100663296
     393216
  134610944
 1476853760
  254214144
 -237436929
 Monthly Sea Surface Temperature anom (C) Had: 1880-11/1981, oi2: 12/1981- 7/2007
 missing_data flag:   254214144
STOP YEAR TOO LOW
```

Subject: Re: Problem with data access
From: @hotmail.com>
Date: Thu, 30 Aug 2007 09:16:50 -0500
To: <rruedy@giss.nasa.gov>

Thanks. I believe that did it.

Regards,

----- Original Message -----
From: "Reto Ruedy" <rruedy@giss.nasa.gov>
To: @hotmail.com>
Sent: Wednesday, August 29, 2007 10:02 AM
Subject: Re: Problem with data access

This looks like the typical little_endian/big_endian problem; character data are fine, but the interpretation of numerical data is chip-dependent. It seems your chips are of the little-endian variety.

If your compiler has an option like "-convert big_endian", then all you have to do is recompile the program invoking that option.

If you don't, the README.txt file that accompanied my program contains a routine swap.f . Again, there are 2 options:

- Either swap.f works as is and converts the data files into a form your compiler can handle
- or "swap" crashes; in that case delete from swap.f the section that starts with "c**** Try assuming ..." and ends with "c**** if the section above ...".

One (and usually only one) of these 2 versions of swap.f should do the trick.

Good luck and let me know if you have any further problems. In the worst case, you might tell me what you are trying to do, so I can convert whatever you need into a format that is appropriate for your purposes. But I am confident that the above instructions will allow you to do it yourself.

Reto Ruedy

On Wed, 2007-08-29 at 09:14 -0500, wrote:

I tried to access the binary files at
ftp://data.giss.nasa.gov/pub/gistemp/download/ using SBBX__to_1x1.f
without success. I am on Windows XP, using gfortran compiler. Please advise if you have any suggestions.

Thanks,

Here is the output with the ITEST file as the input.
rename (link) Ts_anom_file to TS_DATA if ocnflag=0or2
rename (link) SST_anom_file to SST_DATA if ocnflag>0
ocn-flag: 0 no ocn, 1 ocn only, 2 ocn+land
enter: month(1-12) year (1880-?) ocn-flag(0-2)
data type and source:
GHCN V2 TemperatureANOM (C) CR 1200KM

Subject: Blog post re: year 2000 correction
From: "Winstein, Keith" <Keith.Winstein@wsj.com>
Date: Thu, 16 Aug 2007 13:21:35 -0400
To: <rruedy@giss.nasa.gov>

Hi Dr. Ruedy,

FYI, here is the blog post: http://blogs.wsj.com/numbersguy .

Thanks very much for your assistance with this. I recognize that you probably (justifiably) view this as a bogus tempest in a teapot, and I hope that my blog post doesn't further fuel this picayune faux-controversy. But there is a significant group of amateurs that were very interested in the answer to these questions, so I'm sincerely grateful that you were willing to help set the record straight.

Please let me know if you have any corrections, questions or comments.

(By the way, I apologize for "Mr. Ruedy" -- our practice in the paper is to reserve "Dr." for a medical doctor.)

Best,
Keith

Subject: RE: Blog post re: year 2000 correction
From: "Winstein, Keith" <Keith.Winstein@wsj.com>
Date: Thu, 16 Aug 2007 14:22:20 -0400
To: <rruedy@giss.nasa.gov>

Hi Reto,

Sure, here it is.

Best,
Keith

==========

<http://blogs.wsj.com/numbersguy>
August 16, 2007, 11:02 am

Global Warming Debate Overheats With Bad Numbers

/(The following is a guest post by The Wall Street Journal's Keith Winstein.
Carl Bialik will be back tomorrow.)/

Did a blogger fix a calculation error in NASA's global-warming records, making 1934, and not 1998, the hottest year on record?

Well, no.

Commentators erupted last week with the news that Stephen McIntyre, a Canadian mathematician and blogger, had found a mistake in U.S. temperature records maintained by the National Aeronautics and Space Administration. In fixing the problem, NASA was said to have destroyed a central plank of support for global warming.

"A blogger's recalculation of NASA data puts 1934, not 1998, as the warmest year on record," read a front-page blurb Friday on the New York Times Web site, pointing to a Times opinion blog. "Among global warming Cassandras, the fact that 1998 was the 'hottest year on record' has always been an article of faith."

"NASA has now silently released corrected figures, and the changes are truly astounding," wrote a blogger at dailytech.com. Even Rush Limbaugh devoted a chunk of his radio program to the issue, saying, "One of the central tenets of the global warming hoaxers today is that 1998 was the hottest year in history on record... It turns out that the statistics, the temperature data that NASA used to compile the temperatures in 1998 is wrong."

But the commentators are mistaken. Part of the story is true: Mr. McIntyre, a former mining-industry executive who is well-known for efforts to scrutinize climate-change data, did find a calculation error in a NASA Web

page listing the average U.S. temperatures over the last 127 years. NASA had
been combining thermometer data from two different sources -- one until
1999, and another source for afterward. But the two sources had been
calibrated differently, and the agency hadn't properly accounted for the
difference. Mr. McIntyre pointed the error out to scientists at NASA, who
posted a revised file last Tuesday. And the revised file did list 1934 as
slightly warmer, in the continental U.S., than 1998 -- by 1/50th of a degree
Celsius -- though it turns out the flaw discovered by Mr. McIntyre had
nothing to do with that. More on this last point in a moment.

In an interview, Mr. McIntyre said he just wanted NASA to be more
transparent about how it calculates the annual temperature averages. "The
reaction in the right-wing blogosphere is overwrought," Mr. McIntyre said.
"I certainly haven't said that this is some kind of magic bullet that
disproves global warming." Mr. McIntyre's real beef is that he thinks the
country's weather stations need auditing. On his blog
<www.climateaudit.org>, Mr. McIntyre takes the position that climate
scientists should post their complete data and computer code to allow others
to audit their conclusions, and he's concerned about the effect on the NASA
flaw on scientists who may have relied on the data. "I'm not saying that it
hasn't gotten warmer. There's lots of evidence that it has gotten warmer. It
doesn't mean you don't sort out the quality of your stations," he said. (Mr.
McIntyre was featured in a front-page article in The Wall Street Journal
about his criticism of another climate science paper that estimated
temperatures over the last thousand years.)

Pegging the "warmest year" in the U.S. is difficult. Because there are fewer
thermometers measuring temperatures in the U.S. than in the whole world,
estimates of the average U.S. temperature are less precise than those for
the globe. Reto A. Ruedy, a NASA scientist who helps calculate the data,
said NASA's measurements of average yearly temperature in the continental
U.S. have a margin of error of 0.47 degree Celsius. As a result, at least 12
years out of the last 127 can claim to be in a statistical tie for warmest
in the U.S. NASA's correction concerned only U.S. temperatures, meaning it
has little or no bearing on the "global" warming argument. Global warmest
has been something of a moving target: The Intergovernmental Panel on
Climate Change wrote in 2001 that 1998 was the warmest year on record, but
that conclusion was made obsolete by 2002, 2003, 2004, 2005 and 2006 -- all
of which were also quite warm.

Back in the U.S., it turns out 1934 and 1998 have been swapping
(statistically insignificant) spots on the ranking for a number of

years.
Mr. Ruedy said NASA downloads new thermometer data every month, and recalculates annual average temperatures based on things like thermometer
calibrations, "urban warming" corrections and other adjustments. In 2001's
calculations, 1934's average was warmer by a very slight amount. By 2006,
1934 and 1998 were at an exact, not just statistical, tie (NASA rounds the
figures to the nearest hundredth of a degree Celsius). In an early 2007 update, 1998 had edged ahead, but by July, 1934 was back on top by 1/50th of
a degree Celsius. All of these movements were the result of NASA's calibrations, not the flaw identified by Mr. McIntyre. The latest shift showed up on NASA's Web site when it did because the agency incorporated all
of its latest data online when it was making the unscheduled update to address the flaw Mr. McIntyre spotted.

Mr. McIntyre said he doesn't contest the notion that the flaw he identified
had nothing to do with the change in ranking for 1934 and 1998. He has exchanged e-mail with Mr. Ruedy about the flaw, but not on that issue. (The
two have a less-than-cordial relationship after another dust-up earlier this
year.) In the view of NASA's Mr. Ruedy, the fact that 1934 and 1998 were well within the margin of error before (and still are) makes it silly to try
to rank them. "This is totally ridiculous," Mr. Ruedy said. "Lots of noise
about noise."

/-- Keith Winstein <mailto:keith.winstein@wsj.com>/

> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Thursday, August 16, 2007 2:00 PM
> To: Winstein, Keith
> Subject: Re: Blog post re: year 2000 correction
>
> Hi Keith,
>
> On Thu, 2007-08-16 at 13:21 -0400, Winstein, Keith wrote:
> > Hi Dr. Ruedy,
> >
> > FYI, here is the blog post: http://blogs.wsj.com/numbersguy .
> >
> > Thanks very much for your assistance with this. I recognize
> that you
> > probably (justifiably) view this as a bogus tempest in a
> teapot, and I
> > hope that my blog post doesn't further fuel this picayune
> > faux-controversy. But there is a significant group of amateurs that
> > were very interested in the answer to these questions, so I'm
> > sincerely grateful that you were willing to help set the record
> > straight.
> >
> > Please let me know if you have any corrections, questions
> or comments.

(By the way, I apologize for "Mr. Ruedy" -- our practice in the paper
is to reserve "Dr." for a medical doctor.)

No problem with that.

Best,
Keith

Unfortunately, I don't seem to be set up to get to your web site because of a "precondition failed" error and our web master is on vacation.

Is there any way you could email your article to me - I'd be very interested to see what came out of our conversation.

Cheers,

Reto

Subject: Re: yr 2000 corr.
From: Keith Winstein @MIT.EDU>
Date: Fri, 10 Aug 2007 17:52:54 -0400 (EDT)
To: Reto Ruedy <rruedy@giss.nasa.gov>
CC: Keith Winstein @MIT.EDU>

Thanks, this is very interesting -- even playing this "which is numerically higher" game (if you will indulge that for a bit more), the correction did not affect the relative ordering of the years. 1934 was at 1.25 before and after the correction, and 1998 was at 1.23 before and after the correction.

Do you have any idea why the "before_correction" data doesn't match the version that Google downloaded on July 23, 2007 from http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt ?

http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp/graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a

In _that_ version, 1934 was at 1.23 and 1998 was at 1.24.

Perhaps the July 23 2007 version had not yet incorporated the June 2007 data? Any insights would be much appreciated.

Thanks, and best regards,
Keith Winstein
617-654-6864
The Wall Street Journal

On Fri, 10 Aug 2007, Reto Ruedy wrote:

> Hi Keith,
>
> Hope you got my data; by the way, the standard deviation of the US series is about .47 C . So the .5C is about 1 standard deviation.
>
> We got part of our estimate based on comparing means of model data with applying our method to the same data after removing some of these data similar to what we had available in observations.
>
> Reto

Subject: Re: yr 2000 corr.
From: Keith Winstein @MIT.EDU>
Date: Fri, 10 Aug 2007 18:24:07 -0400 (EDT)
To: Reto Ruedy <rruedy@giss.nasa.gov>
CC: Keith Winstein @MIT.EDU>

Yes, if that's the case, it does seem like this kerfluffle is totally unrelated to the year-2000 correction. (Or at least, even if you had never fixed the bug, the new files posted in February 2008 would have caused a kerfluffle.)

Thank you so much for all your time.

Regards,
Keith

On Fri, 10 Aug 2007, Reto Ruedy wrote:

> Hi Keith,
>
> We compute these means every month, but since these are annual means,
> they are copied to the web site only once a year (on February).
>
> So the change that caused all the havoc must have happened after one of
> the previous routine updates.
>
> Thanks for noticing that,
>
> Reto
>
> On Fri, 2007-08-10 at 17:52 -0400, Keith Winstein wrote:
> > Thanks, this is very interesting -- even playing this "which is
> > numerically higher" game (if you will indulge that for a bit more), the
> > correction did not affect the relative ordering of the years. 1934 was at
> > 1.25 before and after the correction, and 1998 was at 1.23 before and
> > after the correction.
> >
> > Do you have any idea why the "before_correction" data doesn't match the
> > version that Google downloaded on July 23, 2007 from
> > http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt ?
> >
> > http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp
> > /graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&c
> > t=clnk&cd=1&gl=us&client=firefox-a
> >
> > In _that_ version, 1934 was at 1.23 and 1998 was at 1.24.
> >
> > Perhaps the July 23 2007 version had not yet incorporated the June 2007
> > data? Any insights would be much appreciated.
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> > Thanks, and best regards,
> > Keith Winstein
> > 617-654-6864
> > The Wall Street Journal
> >
> > On Fri, 10 Aug 2007, Reto Ruedy wrote:
> >
> > > Hi Keith,
> > >
> > > Hope you got my data; by the way, the standard deviation of the US
> > > series is about .47 C . So the .5C is about 1 standard deviation.

We got part of our estimate based on comparing means of model data with applying our method to the same data after removing some of these data similar to what we had available in observations.

Reto

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: New Email
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 10 Aug 2007 16:04:20 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>, Darnell Cain <dcain@giss.nasa.gov>

Not sure which 2001 paper you are referring to:

Hansen, J.E., et al. 2001: A closer look at United States and global surface temperature change. J. Geophys. Res.
is at http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html

Hansen, J.E., and Mki. Sato, 2001: Trends of measured climate forcing agents. Proc. Natl. Acad. Sci.
is at http://pubs.giss.nasa.gov/abstracts/2001/Hansen_Sato.html

I assume the 1981 paper is Hansen et al. rather than Lacis et al.

Hansen, J., et al. 1981: Climate impact of increasing atmospheric carbon dioxide. Science

is at http://pubs.giss.nasa.gov/abstracts/1981/Hansen_etal.html

rbs

On Aug 10, 2007, at 15:54, James Hansen wrote:

> o.k., here is the draft e-mail, which needs the figures and links -- I am so it is hard to read right now.
> Jim<LightUpstairs.10Aug2007.doc>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: New Email
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 10 Aug 2007 16:43:30 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>

<x-flowed>

Makiko,

I generally prefer that when people link to docs on the website that you use the HTML page which has the "Download PDF" link rather than point directly at the PDF file itself.

The word "are" all caps in the third paragraph out to be changes to lower case and put in bold. Being in all caps right now and close to the abberviation GHCN, it almost looks like it too is an abbrevaation.

When I view the Word DOC there is no degree sign in 0.15 deg-C. Is that intentional?

The phrase "order one-thousands" should be "order one-thousandth".

rbs

On Aug 10, 2007, at 16:35, Reto Ruedy wrote:

> Makiko,
>
> In the second to the last paragraph a "w" seems to be missing; 'global arming' is bad also, but I think it meant to be global warming.
>
> Reto
>
> On Fri, 2007-08-10 at 16:26 -0400, Makiko Sato wrote:
> > Robert,
> >
> > I sent this to Jim and he said he would read it once more. Do you want to change the links? If I hear from him, I will convert to a pdf and give it to you.
> >
> > Makiko
> >
> > Date: Fri, 10 Aug 2007 16:18:16 -0400
> > To: "James Hansen" <jhansen@giss.nasa.gov>
> > From: Makiko Sato <makis@giss.nasa.gov>
> > Subject: Re: New Email
> >
> > Are the figures too large or too small? If I make them slightly larger, the US one gets onto the 2nd page.
> >
> > Makiko
> >
> > At 15:54 2007/08/10, you wrote:

o.k., here is the draft e-mail, which needs the figures and links
-- I am being it is hard to read right now.
Jim
Content-Type: application/msword; name="LightUpstairs.10Aug2007.doc"
Content-Disposition: attachment; filename="LightUpstairs.10Aug2007.doc"
X-Attachment-Id: f_f573171w

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

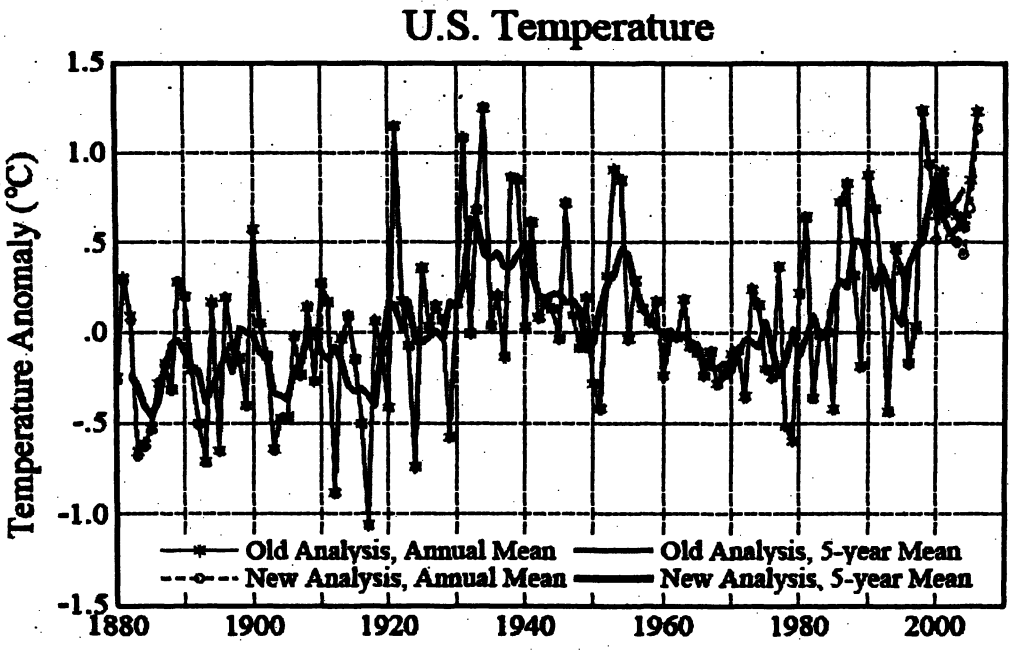
A Light On Upstairs?

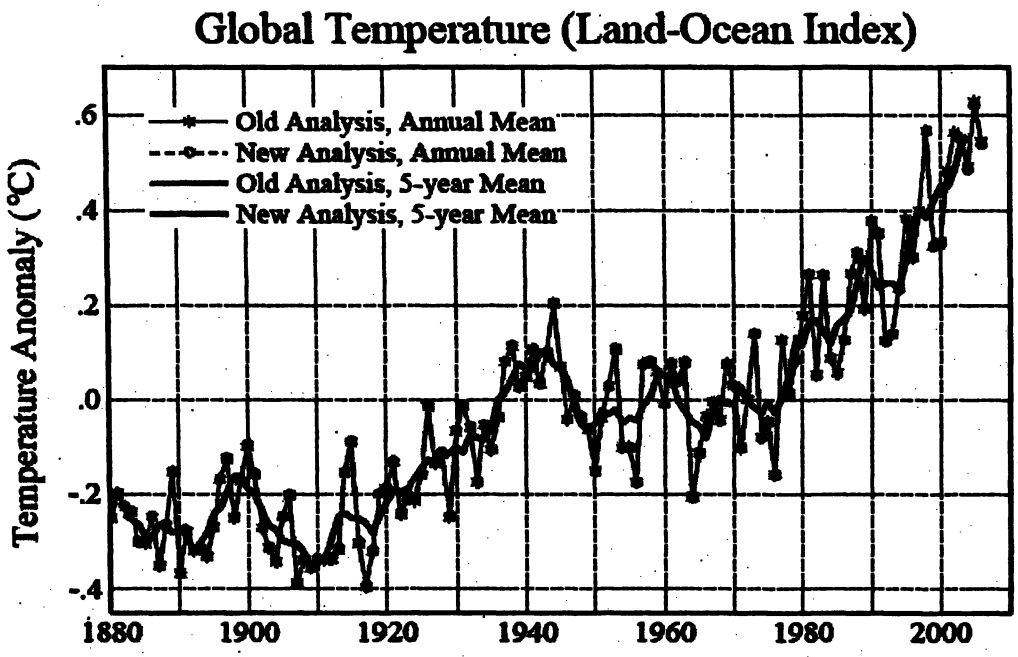
Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis (http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) had a flaw in the U.S. data. In that (2001) update of the analysis method (originally published in our 1981 Science paper – http://pubs.giss.nasa.gov/abstracts/1981/Hansen_etal.html) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations are in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in 2001 in the records at those stations, some up, some down (over U.S. only). This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

The flaw did have a noticeable effect on mean U.S. temperature anomalies, as much as 0.15°C, as shown in Figure 1 below (for years 2001 and later, and 5 year mean for 1999 and later). The effect on global temperature (Figure 2) was of order one-thousandth of a degree, so the corrected and uncorrected curves are indistinguishable.





Contrary to some of the statements flying around the internet, there is no effect on the rankings of global temperature. Also our prior analysis had 1934 as the warmest year in the U.S. (see the 2001 paper above), and it continues to be the warmest year, both before and after the correction to post 2000 temperatures. However, as we note in that paper, the 1934 and 1998 temperature are practically the same, the difference being much smaller than the uncertainty.

Somehow the flaw in 2001-2007 U.S. data was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must "step down", or that I must "vanish". Hmm, I am not very good at magic tricks.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem, though.

Jim

A Light On Upstairs?

Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis (http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) had a flaw in the U.S. data. In that (2001) update of the analysis method (originally published in our 1981 Science paper – http://pubs.giss.nasa.gov/abstracts/1981/Hansen_etal.html) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

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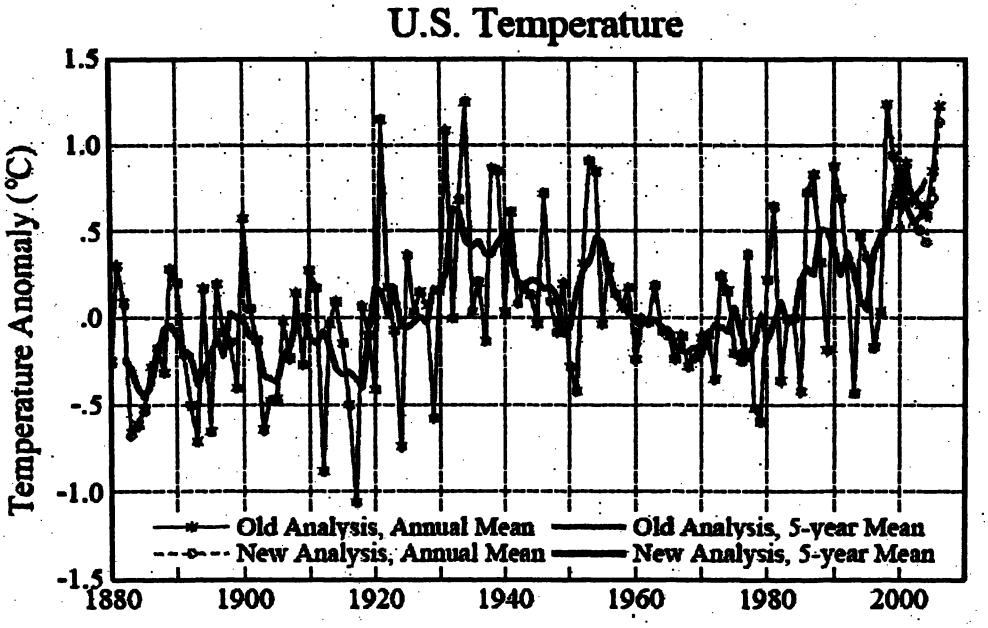

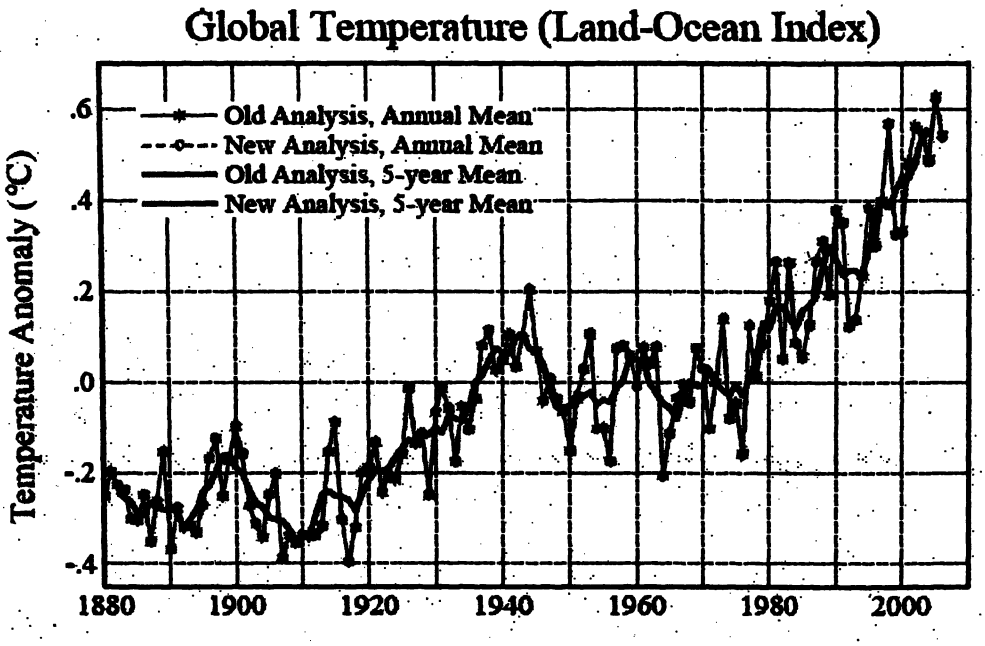

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Subject: Re: New Email
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 10 Aug 2007 17:55:38 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, rruedy@giss.nasa.gov

Attached is the Word DOC and PDF with a few corrections that Makiko had made to her copy but which were not in Jim's copy:

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2) put the degree symbol in 0.15°C
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rbs

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> Robert, Please move to CU site and hide this after Jim checks it.
> Darnell, Please send it out to Jim's e-mail list. Jim said if I don't want to, you should do, but it is not a matter of I WANT To or NOT WANT TO. I don't know how to.
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down deg. Jim made it 0.15C, so maybe he is using the SI unit.

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Yes, you are right. I will make the change.

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To: "James Hansen" <<mailto:jhansen@giss.nasa.gov>
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Subject: Re: New Email

Are the figures too large or too small? If I make them slightly larger, the US one gets onto the 2nd page.

Makiko

At 15:54 2007/08/10, you wrote:
o.k., here is the draft e-mail, which needs the figures and links
-- I am so it is hard to read

right now. Jim
Content-Type: application/msword; name="LightUpstairs.10Aug2007.doc"
Content-Disposition: attachment; filename="LightUpstairs.10Aug2007.doc"
X-Attachment-Id: f_f573171w
--
Reto Ruedy <<mailto:rruedy@giss.nasa.gov> rruedy@giss.nasa.gov >

--
Robert B. Schmunk,
<mailto:Robert.B.Schmunk@nasa.gov> Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

<LightUpstairs.10Aug2007.doc>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

LightUpstairs.10Aug2007-x.doc	**Content-Type:** application/octet-stream **Content-Encoding:** base64

—Part 1.3

Part 1.3	**Content-Type:** text/plain **Content-Encoding:** 7bit

—LightUpstairs.10Aug2007-x.pdf

LightUpstairs.10Aug2007-x.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

—Part 1.5

Part 1.5	**Content-Type:** text/plain **Content-Encoding:** 7bit

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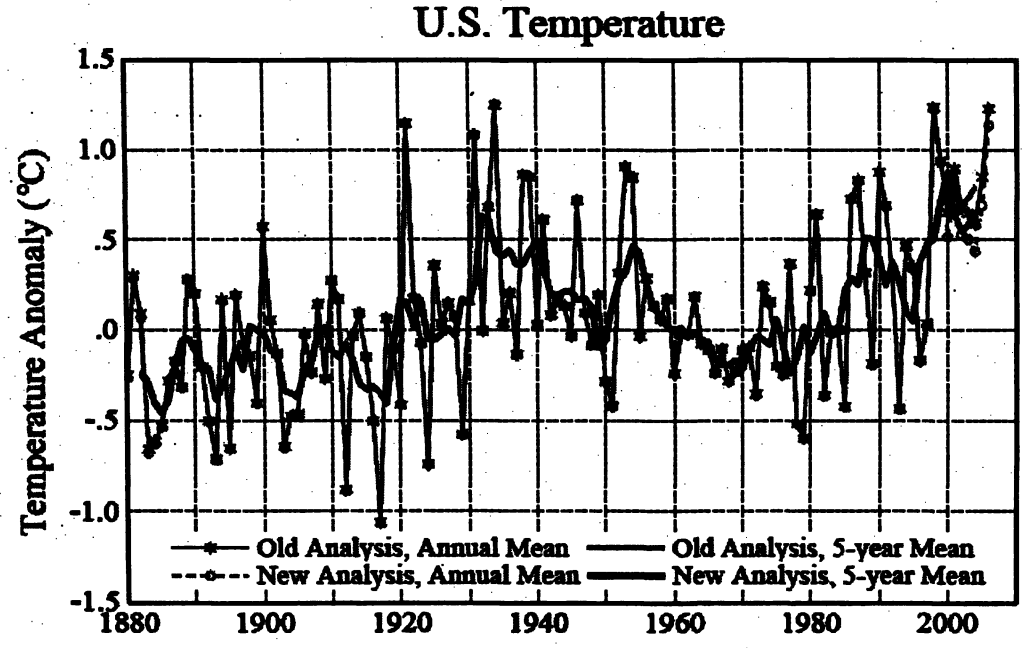

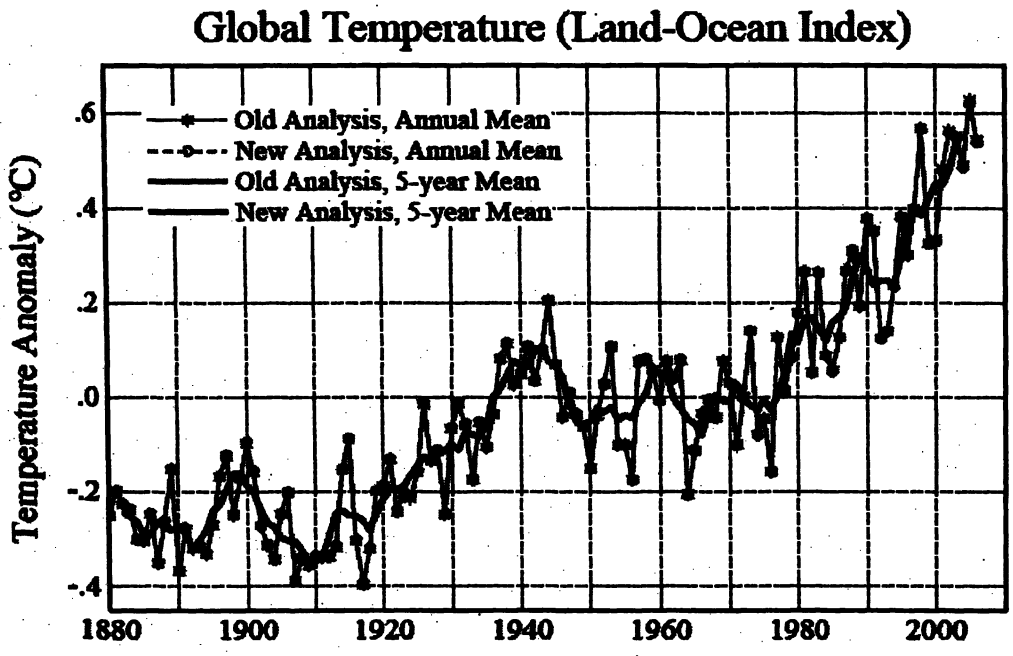

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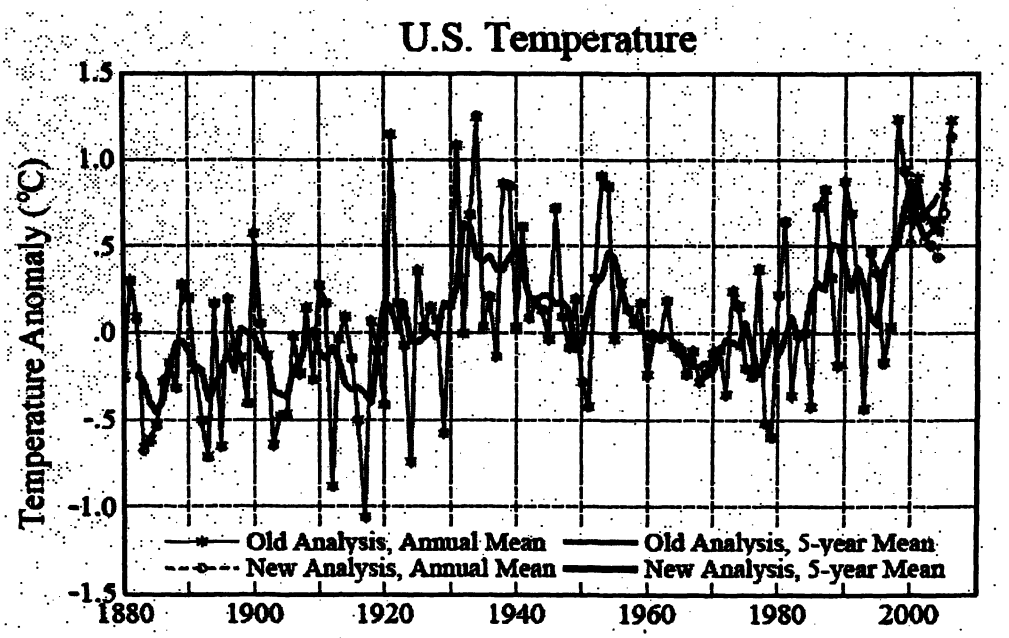

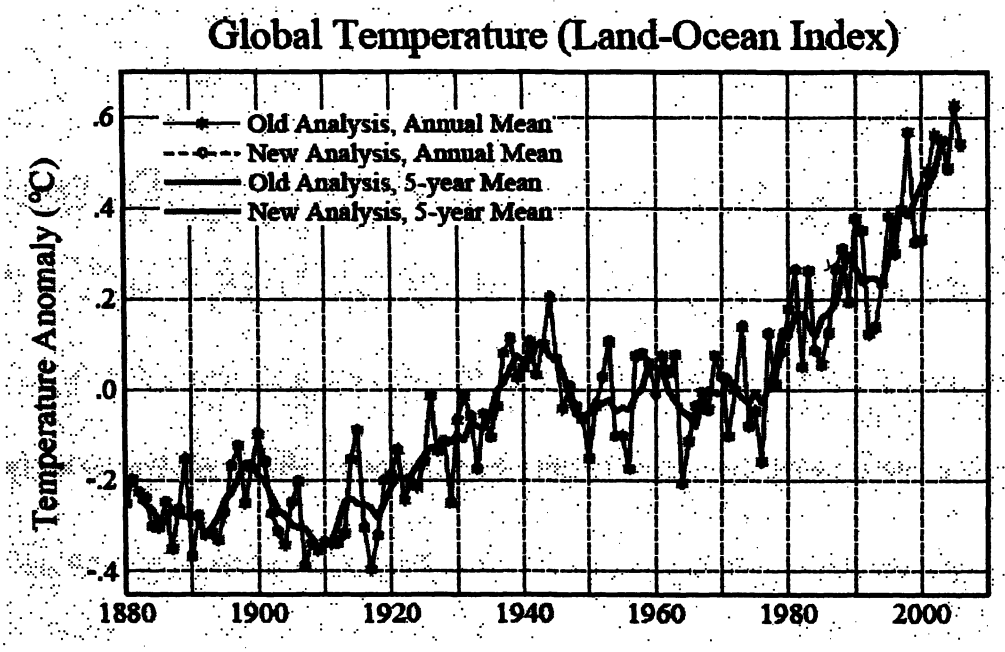

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From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 10 Aug 2007 17:57:22 -0400
To: Darnell Cain <dcain@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>

Darnell,

I am putting the PDF on the CU website at

http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf

rbs

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Yes, you are right. I will make the change. (By the way, now in Japan a song called "I am a thousand winds" is very popular.)

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> > > > > Content-Type: application/msword; name="LightUpstairs.
> 10Aug2007.doc"
> > > > > Content-Disposition: attachment; filename="LightUpstairs.
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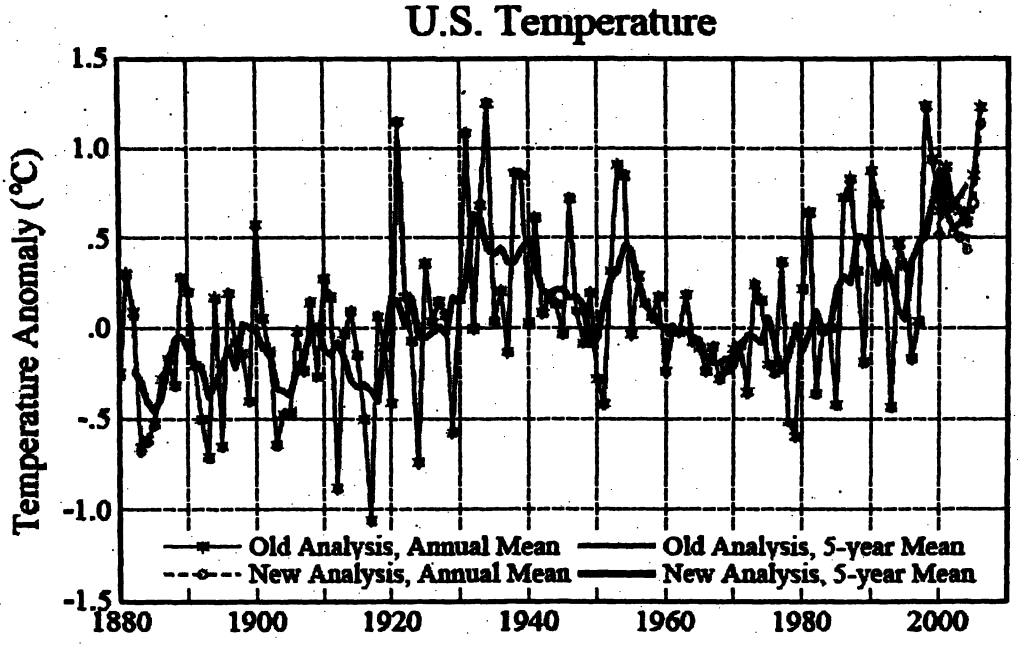

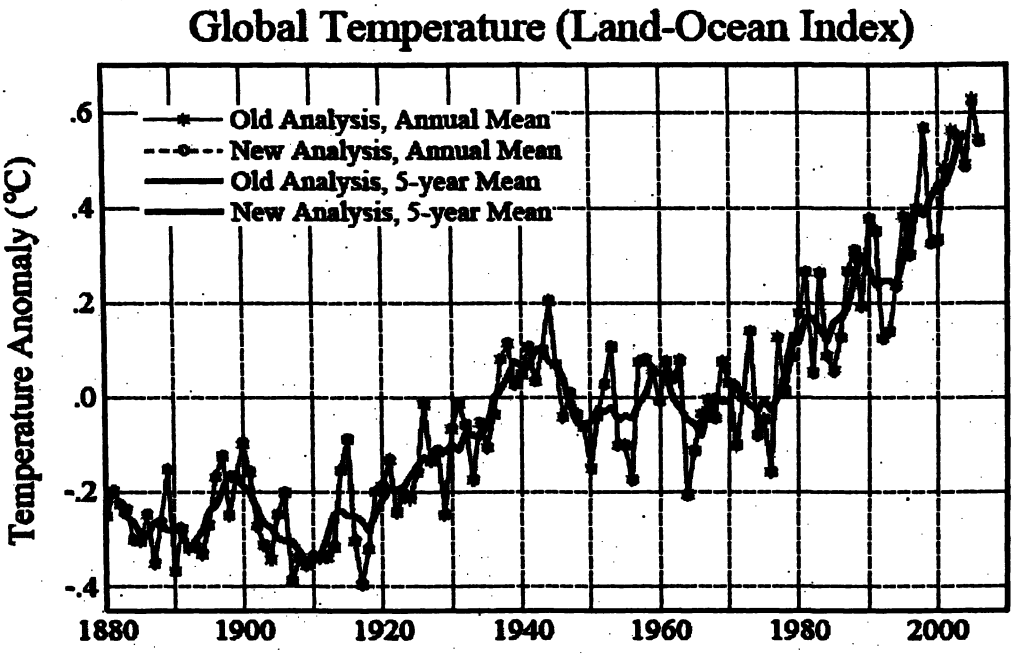

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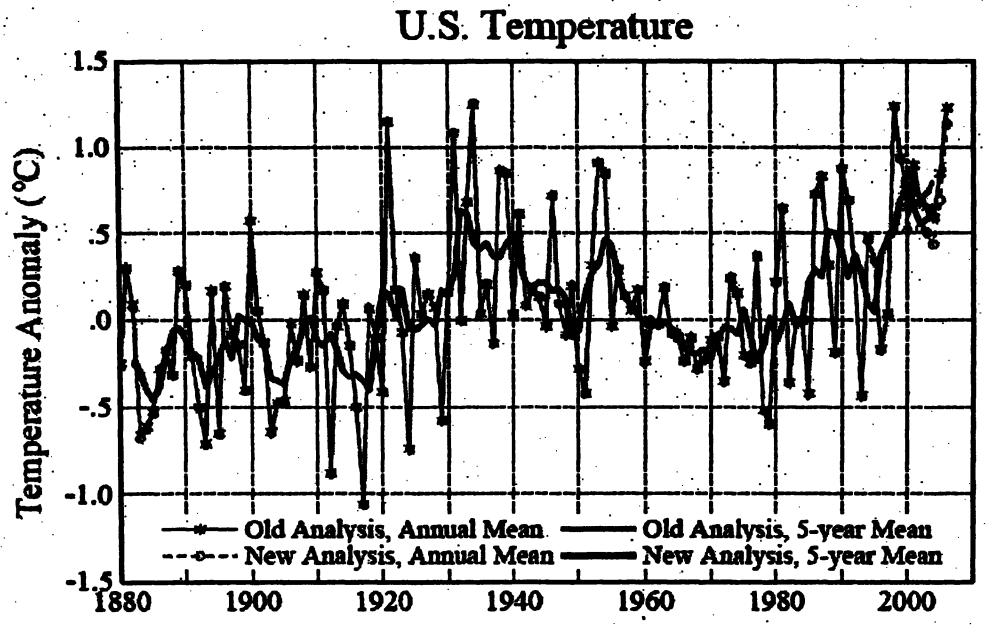

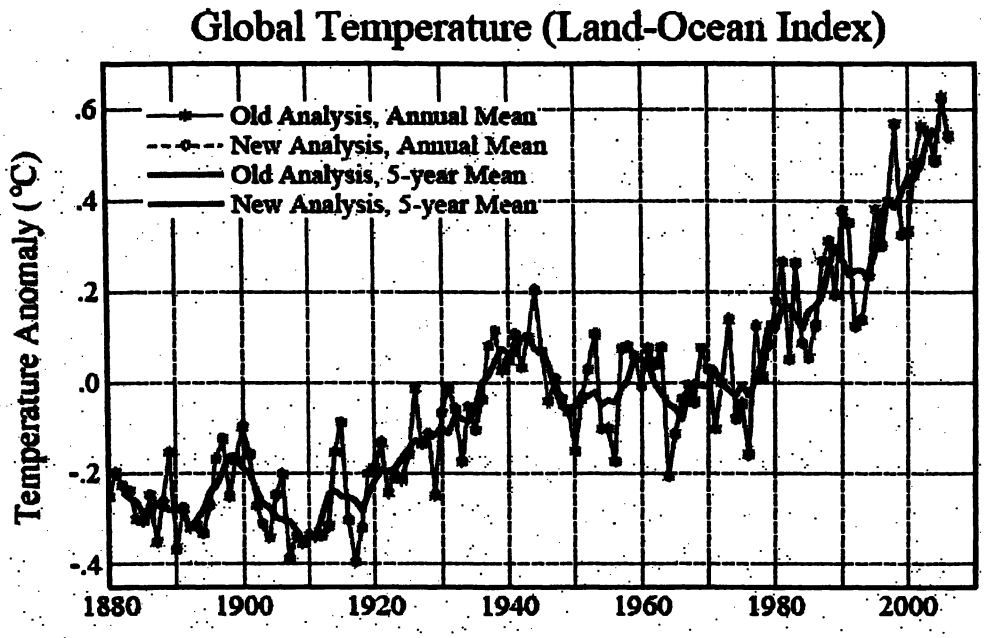

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From: @gmail.com>
Date: Thu, 16 Aug 2007 16:09:45 -0400
To: lesgiss
CC: rschmunk@giss.nasa.gov, rruedy@giss.nasa.gov, jhansen@giss.nasa.gov, lmccarthy@giss.nasa.gov, gschmidt@giss.nasa.gov

Hi all,

I am so hence the GMail address as I respond to the e-mail.

Gavin has the essentials correct in responding to Les's question.

On about May 16, around 10:30 or 11:00 p.m. as I was getting ready to leave GISS for the night, I belatedly checked the error logs on the two web servers and discovered that there were several thousand errors in the log on Web2. On a normal day there would be about 500.

The errors in question were all for addresses which didn't exist in either CGI area or in the "work space" area for the GISTEMP station data script. Further investiation revealed that someone had been firing off requests to Web2 since about 2:00 that afternoon for the station data and by the time I looked into the situation, there had been at least 16,000 requests. Perhaps half of these had gone to addresses in the CGI directory, which means that activating CGI scripts to extract data, etc.

The identity of the computer making the requests was consistent, and as best I recall was something in the domain of Rogers Communications, a Canadian phone company and ISP.

Plainly this activity was from an "automated" agent, which in rough parlance is usually called a "robot". Many robots have legitimate purposes, e.g. search engines such as Google or Yahoo, but others do not (spambots), and others one just doesn't know.

As the robot on May 16 came from a generic ISP address rather than, say, an academic address and further because it's "user-agent" tag provided no further information about who was running it, and also because the GISS websites have "robots.txt" files which instruct all well-behaved web robots to stay out of the CGI directories, I cut off access to the ISP in question to the websites on Web2.

The next day I received e-mail from McIntyre asking what was up. He did not identify himself or on whose behalf he was acting.

At some point Reto got involved in the communications, and he must have mentioned to Jim what was up. Later on Reto indicated to me that Jim had said to go ahead and re-grant McIntyre access to the material.

I do not know if at any point McIntyre actually asked Jim or Reto if it was possible to obtain the GISS copy of the station data in a single or small number of files. All I know is that my first contact with him came because he was blasting umpteen thousand requests at the webservers.

I have no idea how much traffic McIntyre's website gets, and I don't know that I have ever even looked at it. His tone in his e-mail was on

the arrogant side, so I had no desire to prolong commnication with him any longer than was necessary.

--
Robert B. Schmunk
___@panix.com

Subject: Re: new USHCN 1880-2005
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Sat, 1 Sep 2007 20:46:25 -0400
To: rruedy@giss.nasa.gov
CC: Makiko Sato <makis@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>, Jeff Berry <jberry@giss.nasa.gov>

Reto, et al.,

There are a couple issues here that I should probably point out.

The Python on Web2 is version 2.2. This is pretty old (Feb 2003) and should probably be updated. It was installed two years ago using an RPM from the IBM website, and the RPMs are rarely current. The current Python is 2.5.something.

I mention that because my experience on Web1 several years ago when trying to update the Python there was that "compiled" Python modules (a few of which the station data scripts make use) end up with version information embedded, and if you use a module compiled with one version of Python with a differnent (more recent) Python install, you can see a ton of warning msgs get fired off. On the webservers, this means that the Apache error_log gets filled up with warning msgs, and real error msgs are harder to notice.

More problematic is that the GISTEMP station data relies on a binary database file in BDB format. The current process is that when the GISTEMP data are updated on the machine Jay, a copy of this file (or multiple files) are created, they get copied over to Web2, and a little script has to be run to update the files from the older BDB on Jay to the newer BDB on Web2.

Personally, I'd love it if we could ditch the BDB files entirely, as this would remove an element from the process which I suspect no one currently at GISS understands. Further, if we were using a file format which we did (better) understand, it would make it possible in the future to just hand off the big file and some documentation about its format to persons inquiring about the station data. This would be a double plus, as hopefully we would also no longer have to worry about idiots writing robot scrapers to extract all the station data from the website.

And regarding the GISTEMP homepage, yes, it has looked rather cluttered for some time. I am in favor of anything to simplify the appearance and to shuffle some of the info off to new pages.

rbs

On Aug 27, 2007, at 19:20, Reto Ruedy wrote:

> Hi Robert,
>
> We'll need your help with two things:
>
> 1 - We'll simplify the main gistemp page but want to create links to pages that describe exactly what we do. Once I have a preliminary version of the text, I'll need your help to present it properly.

2 - We'd like to port what we do currently on the machine jay to some other machine, at least the python part that has to do with the data base system bdb . Ken Lo tried it but had problems using the version of python installed on discover (a Goddard machine).

Maybe, we can get it to work on web2 - but I'm sure we need your help with that. We should also ask systems to install python on at least one other machine (athena), so we have another backup.

By the way, I changed the format of the output of the station data tables that can be created on our web site, replacing all x.x0 by x.x for the monthly and seasonal means, I left 2 digits for the annual mean.

Reto

On Mon, 2007-08-27 at 18:42 -0400, James Hansen wrote:

> This is excellent. This is consistent with the philosophy described in our 2001 paper, i.e., letting NOAA do the primary, labor-intensive task of cleaning U.S. station data. But it is appropriate for us to do our own urban correction using satellite night lights. I believe that they (NOAA) have underestimated urban warming effects, so it is better that we keep our own urban correction.
>
> By the way, in case their is any question about why we get into this (surface temperature analysis) business at all, given NOAA's responsibilities: originally (in the 1970s) this was because there was no global analysis, the only available analysis being Murray Mitchell's, which only went down to 20N latitude. We showed that Southern Hemisphere coverage was actually useful, because of the large correlation distance of anomalies.
>
> Funny thing is that, despite the much larger (person-wise) efforts that the other groups put into this, our analysis scheme still proved useful in 2005. The reason that we found 2005 (slightly) warmer than 1998 was that we included the full Arctic. And satellite IR data suggest that, if anything, our Arctic anomalies underestimate the actual positive anomalies there.
>
> Jim
>
> At 05:49 PM 8/27/2007, Reto Ruedy wrote:
>
> > Gavin,
> >
> > Yes it was done properly this time - also, just looking at the annual
> > US-means, that method seems to do pretty well. Steve will find the few
> > stations where it didn't.
> >
> > I thought of taking any detailed descriptions out of the "Background"
> > section with links to separate pages, where the processes are carefully
> > described and which are updated, whenever a change is made, noting the
> > date when the change occurred. That should satisfy most people.
> >
> > Rounding to the nearest .1C was Phil Jones' suggestion; I realize that
> > we have to wait a while to do so.

Reto

On Mon, 2007-08-27 at 17:14 -0400, Gavin Schmidt wrote:
> that's one less thing to worry about!
>
> I wouldn't recommend changing the format - any such such change is bound
> to be interpreted as an attempt to spin the numbers.
>
> I take it that the 2006, 2007 numbers from GHCN are offset so that there
> is no discontinuity when going from USHCN to GHCN as you did for the
> post 2000 numbers in the last analysis?
>
> If and when Jim decides to adopt this, I also recommend that we have a
> specific page outlining the change and the differences it makes so that
> there is no accusation that we're quietly fiddling the numbers.
>
> thanks,
>
> Gavin
>
> On Mon, 2007-08-27 at 17:04, Reto Ruedy wrote:
> > No - but I needed an extra digit to decide that question (1.244 vs
> > 1.238C). Maybe, we'll switch to a single digit in the US-table, then we
> > have 3 years in the number 1 position.
> >
> > Reto
> >
> > On Mon, 2007-08-27 at 16:39 -0400, Gavin Schmidt wrote:
> > > but did 1934 and 1998 swap places? ●
> > >
> > > gavin
> > >
> > > On Mon, 2007-08-27 at 16:37, Reto Ruedy wrote:
> > > > Hi Jim,
> > > >
> > > > Over the weekend, I used the newest version of the USHCN data to redo
> > > > our analysis; I did it twice, with and without the data USHCN filled in.
> > > >
> > > > No surprises; between 1920 and 2005 the change in the US ann. means was
> > > > less than 0.02 C, the largest difference was in the 1880's (<0.16 C).

> With the new data, the US trend will be slightly higher.
>
> The only interesting thing was, that my first attempt to process these
> data failed. It turned out that our program could not handle the attempt
> to remove data that were not present.
>
> All went fine when I took the US stations off our list of manual
> corrections.
>
> It seems that all our manual deletions of parts of USHCN data were also
> either deleted or modified in the new USHCN data. Their more rigorous
> purging of odd-looking beginnings of station records seems to be the
> main reason for the changes.
>
> I suggest, we switch to the new USHCN data for future updates. It does
> not matter much to keep or not to keep USHCN fillers; not keeping them
> is a little more in line of what we did so far.
>
> Reto
>
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: [Fwd: GISTEMP data reproduction request]
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Tue, 4 Sep 2007 18:20:53 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <rruedy@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>, gavin@giss.nasa.gov

<x-flowed>

Early afternoon is now long past. Did any discussion occur
about this that I missed?

rbs

On Sep 4, 2007, at 12:29, James Hansen wrote:

> Let's talk about this early this afternoon. I beleive that we also got a request from McIntyre late last week? Jim
>
> On 9/4/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote: Hi Jim,
>
> This refers to a web site belonging to a person in England - at first sight, his analyses of GHCN data seem strangely naive, some inspired by McIntyre's blogs.
>
> Anything we should do about this inquiry ?
>
> Reto
>
> -------- Forwarded Message --------
> From: Michael Cassin <michael@cassin.name>
> To: Reto Ruedy <rruedy@giss.nasa.gov>
> Subject: GISTEMP data reproduction request
> Date: Tue, 4 Sep 2007 15:11:31 +0100
>
> Hello Dr Ruedy,
>
> My name is Michael Cassin. I'm developing some technology for hosting online datasets and statistical analysis, and would like to inquire about the possibility of reproducing the GISS temperature data. I realise it is available through the web interface, but would like to know if there is an ftp, or other, site where the entire dataset can be downloaded. I'd also like to be sure of any copyright issues.
>
> Apologies for the direct intrusion into your inbox. I would understand if you redirect my inquiry.
>
> Best regards,
>
> Mike Cassin
> Managing Director
> Stikir Ltd
>
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Python station data libraries
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Tue, 4 Sep 2007 20:00:02 -0400
To: rruedy@giss.nasa.gov

Reto,

The "compiled stuff" for the station data is a group of C extensions to the Python code.

The compiled extensions are located on Web2 in the main Python libraries directory

/opt/freeware/lib/python2.2/site-packages

The source for these on Jay seems to be in the directory

/gcm/jglascoe/PYTHON/EXTENSIONS

The latter location is messy as there are Makefiles and other stuff. It's not sure whether all of the files are needed to actually generate the needed *.so files.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Python station data libraries
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Wed, 5 Sep 2007 21:11:36 -0400
To: rruedy@giss.nasa.gov

Reto,

Although I got the do_comb.sh script to run on Web2, the output is not the same as that generated on Jay.

The v2.mean.bdb file has the same length, but a close look with a hexedit program reveals that the binary data are not the same.

The other files all have different lengths.

I also mentioned trying to use Perl to read the BDB files, and with a little bit more effort I found it was actually pretty easy. Following is a little Perl program which can be run on Web2 and which prints out the info in the BDB file for an input station ID. One little oddity in the output is that the month data are in a slightly strange order; all the January data come first, then the February data, then etc.

rbs

--

```
#!/usr/local/bin/perl

use strict;

use BerkeleyDB;

my $db = new BerkeleyDB::Hash
              -Filename => "/www/data/htdocs/work/gistemp/STATIONDATA/v2.mean.bdb",
              -Flags    => DB_RDONLY;

my $status;

# Extract all the station IDs
### $status = $db->db_get ('IDS', my $ids);
### my @ids = split ' ', $ids;

# Print data for a given station ID
if (@ARGV)
{
    $status = $db->db_get ($ARGV[0], my $station);

    print $ARGV[0], ' ', $station, "\n";
}
```

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Python station data libraries
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Wed, 5 Sep 2007 21:25:04 -0400
To: rruedy@giss.nasa.gov

The problem seems to begin with the combiner script, comb_records.py. If I diff the comb.log that it writes out, I get a fairly long output...

```
> diff jay/output_files/comb.log web2/output_files/comb.log | more
206,208c206
<       102663250000 1952 1970 -- UNKNOWN
<       no other records okay
<       102663250001 1952 1962 -- UNKNOWN
---
>       102663250001 1952 1970 -- UNKNOWN
209a208
>       no other records okay
274,276c273,275
<       105655020000 1963 1990 -0.0151220030579
<       105655020001 1962 1991 0.00122468188083
<       105655020002 1961 1980 -0.00536382640612
---
>       105655020001 1962 1991 -0.00401407163743
>       105655020000 1963 1990 -0.0240336857568
>       105655020002 1961 1980 -0.0125414024491
279,281c278,280
<       105655030001 1949 1990 0.0656675281395
<       105655030000 1941 1991 0.0523124031612
<       105655030002 1961 1980 0.0434994881253
---
>       105655030000 1941 1991 0.00918692759065
>       105655030001 1949 1990 0.0222778442602
>       105655030002 1961 1980 0.00023884673577
295,297c294,296
<       105655220000 1951 1991 0.00149033567135
<       105655220001 1951 1981 0.00637254764437
<       105655220002 1961 1990 0.0126603710504
---
>       105655220002 1961 1990 0.0792786575025
>       105655220000 1951 1991 0.0625162872469
>       105655220001 1951 1981 0.0666349723409
337c336
<       107649110000 1951 1981 -- UNKNOWN
---
>       107649110001 1951 1981 -- UNKNOWN
360c359
<       107649600000 1951 1981 -- UNKNOWN
---
>       107649600001 1951 1981 -- UNKNOWN
363c362
<       107649610001 1951 1970 -- UNKNOWN
---
>       107649610000 1951 1970 -- UNKNOWN
418,419c417,418
<       109646580000 1951 1989 -- UNKNOWN
<       109646580001 1951 1989 -0.0137493062552
---
>       109646580001 1951 1989 -- UNKNOWN
>       109646580000 1951 1989 0.0137493062552
```

```
426,427c425,426
<       109646600001 1952 1991 -- UNKNOWN
<       109646600000 1952 1989 -0.00265413761765
---
>       109646600000 1952 1991 -- UNKNOWN
>       109646600001 1953 1991 0.00265413761765
448,449c447,448
<       110647050001 1953 1978 -- UNKNOWN
<       110647050000 1953 1978 0.0125715469538
---
>       110647050000 1953 1978 -- UNKNOWN
>       110647050001 1953 1978 -0.0125715469538
483,484c482,483
<       111619680003 1961 1970 0.346107833731
<       111619680002 1971 1980 0.0032573997873
---
>       111619680002 1971 1980 0.00314964121975
>       111619680003 1961 1970 0.346102352654
488a488
>       111619720003 1971 1980 0.0435639237148
490d489
<       111619720003 1971 1980 0.0443078577002
574,575c573,574
<       113655280003 1971 1980 -0.0194817019421
<       113655280002 1961 1970 0.0467043720642
---
>       113655280002 1961 1970 0.0466850789351
>       113655280003 1971 1980 -0.0199175557801
587,588c586,587
<       113655450002 1961 1970 0.03048175772
<       113655450003 1971 1980 -0.016132028769
---
>       113655450003 1971 1980 -0.0153747188803
>       113655450002 1961 1970 0.0304887649401
603,604c602,603
<       113655570003 1971 1980 -0.0203992580091
<       113655570002 1961 1970 -0.00021008188216
---
>       113655570002 1961 1970 -0.000233964923597
>       113655570003 1971 1980 -0.0206329794005
628,629c627,628
<       113655850002 1961 1970 -0.0193950706364
<       113655850003 1971 1980 -0.01346298735
---
>       113655850003 1971 1980 -0.0128792300561
>       113655850002 1961 1970 -0.0194032442966
635,636c634,635
<       113655920002 1961 1970 0.00958662529441
<       113655920003 1971 1980 -0.00990755699413
---
>       113655920003 1971 1980 -0.0103940334111
>       113655920002 1961 1970 0.00958821501628
708c707,709
<       115624160010 1912 1980 -- UNKNOWN
---
>       115624160011 1912 1980 -- UNKNOWN
>       no other records okay
>       115624160010 1951 1980 -- UNKNOWN
711d711
<       no other records okay
741c741
<       116630230001 1885 1977 -- UNKNOWN
---
```

```
>       116630230000 1885 1977 -- UNKNOWN
746,748c746,748
<       117633310001 1952 1991 -0.00087201508448
<       117633310000 1954 1990 -0.0131936581827
<       117633310002 1971 1980 -0.206643672506
---
>       117633310000 1954 1990 0.118778201059
>       117633310001 1952 1991 0.132205127434
>       117633310002 1971 1980 -0.0744164941412
794,797c794,797
<       118645040012 1951 1989 0.000289012025532

etc. for another 3800 lines.
```

On Sep 5, 2007, at 21:19, Reto Ruedy wrote:

> How different are the 2 text files ?
>
> Reto
>
> On Wed, 2007-09-05 at 21:11 -0400, Robert B. Schmunk wrote:
> > Reto,
> >
> > Although I got the do_comb.sh script to run on Web2,
> > the output is not the same as that generated on Jay.
> >
> > The v2.mean.bdb file has the same length, but a close
> > look with a hexedit program reveals that the binary
> > data are not the same.
> >
> > The other files all have different lengths.
> >
> > I also mentioned trying to use Perl to read the BDB
> > files, and with a little bit more effort I found it
> > was actually pretty easy. Following is a little Perl
> > program which can be run on Web2 and which prints
> > out the info in the BDB file for an input station ID.
> > One little oddity in the output is that the month data
> > are in a slightly strange order; all the January data
> > come first, then the February data, then etc.
> >
> > rbs
> >
> > --
> >
> > #!/usr/local/bin/perl
> >
> > use strict;
> >
> > use BerkeleyDB;
> >
> > my $db = new BerkeleyDB::Hash
> >   -Filename => "/www/data/htdocs/work/gistemp/
> > STATIONDATA/v2.mean.bdb",
> >   -Flags   => DB_RDONLY;

```
my $status;

# Extract all the station IDs
### $status = $db->db_get ('IDS', my $ids);
### my @ids = split ' ', $ids;

# Print data for a given station ID
if (@ARGV)
{
     $status = $db->db_get ($ARGV[0], my $station);

     print $ARGV[0], ' ', $station, "\n";
}




--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025
-- Reto Ruedy <rruedy@giss.nasa.gov>
```

```
--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025
```

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Thu, 6 Sep 2007 15:53:19 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: Reto Ruedy <rruedy@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>

<x-flowed>

The file is just a plain text file. Save it to
disk and open it with whatever plain-text editor
you normally use. If you want to open it with
Word or other fancy text editor, you might need
to rename it so that it ends in ".txt".

rbs

On Sep 6, 2007, at 15:47, Makiko Sato wrote:

> Reto,
>
> I can't open your attachment, but right now I am busy with something else, so I will ask you tomorrow. I am wondering if Jim can open it.
>
> Makiko
>
> At 15:44 2007/09/06, Reto Ruedy wrote:
> > Jim,
> >
> > I prepared a documentation file (preliminary version attached) that divides the process into a preliminary and another 5 steps - Jay's programs are in step 1 and Robert is working on it (he has trouble compiling one of the C programs; also the order in which stations are combined seems dependent on the release of the data base system); I'm currently working on step 2 and Ken is working backwards from step 6 - hope to get through by tomorrow and combine it into a semi-coherent package.
> >
> > A week seems a reasonable estimate to clean up what was missed - a total rewrite of Jay's programs however might easily take longer.
> >
> > Reto
> >
> > On Thu, 2007-09-06 at 13:41 -0500, James Hansen wrote:
> > > Yes, the perception is, unfortunately, what counts now. We will have
> > > to release them with the very strong recommendation that anyone
> > > wishing to actually use them should wait until they are cleaned up,
> > > with the estimate that this will take another week or so (is that the
> > > appropriate estimate to give?).
> > >
> > > Yes, the list should be those stations explicitly removed, since that
> > > is perhaps the most subjective thing that we do to the data, other
> > > than the procedures for analysis that are described in the papers.
> > >
> > > The "current" result is one of the results that we want to illustrate.

> For the other, I was thinking of excluding the correction of two
> stations and not dropping the stations that are on the list of removed
> stations (some of them might get removed by the analysis program, but
> that is o.k., it is using objective criteria). If you do not have
> this, but have something that includes it, for example also replacing
> USHCN of "current" with WMO, that should be all right.
>
> The objective is too show that our partially subjective choice of
> stations to remove does not significantly alter the global warming
> that we obtain. A second objective is to show that the admittedly
> large problems with African and South American data does not
> significantly alter the inferred global warming (this second objective
> just requires Makiko to omit those areas).
>
> Jim
>
>
>
> On 9/6/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Jim,
>
> I understand the need to make the programs and input files
> available.
> But to put out an unusable product (though it works on our
> machines,
> based on the directory structures, compilers, etc. of the
> various
> machines) that has to be repeatedly changed may be
> counterproductive. I
> wish I had another week - or at least a weekend where I could
> work
> without interruption.
>
> (1) As far as list of stations we remove is concerned, most
> are removed
> or remain unused automatically because their records are too
> short to
> have sufficient overlap with the dominating stations. Do you
> only want a
> list of those stations that are explicitly removed at the
> beginning of
> the process due to their strange data ?
>
> (2) Corrections: We correct 2 stations (St.Helena and Lihue)
> and use
> USHCN instead of the corresponding GHCN data. The rest is
> dropping parts
> or all of a record (=cleaning). Hence:
>
> "no corrections"="not correcting the 2 stations, not using
> USHCN, no
> cleaning",
>
> "current"="2 corrections+USHCN+cleaning",
>
> "no cleaning"="2 corrections+USHCN".
>
> Are any 2 of these 3 options what you need ?
>
> I guess (3) can be done by Makiko, if not let me know.
>
> Reto
>

>
> On Thu, 2007-09-06 at 10:28 -0500, James Hansen wrote:
> > Reto, Robert,
> >
> > We are getting more and more questions as to why we will not release
> > our temperature data analysis programs. We need to make these
> > available this week, by the end of the day tomorrow.
> >
> > Can you put these in a place where they are accessible, with an
> > address that I will put in an e-mail? This will be as part of an
> > e-mail that also provides access to the revised "Peak Oil" paper.
> >
> > It probably should include a simple listing of the function of each
> > subroutine. We can note that a simplified version of the programs
> > will be available in the future.
> >
> > Finally we need:
> > (1) a list of the stations that we remove, and
> > (2) line graph of global mean land-ocean temperature index with and
> > without these stations removed (the draft that you gave me has No
> > Corrections, Current Web, No Cleaning -- what do these three
> > categories mean? I believe what we want is two curves, one that uses
> > the data without alterations and one for what we present to the public
> > (3) maps showing the results with and without our changes -- the four
> > maps that you made for 1880-2006 are fine, but the maps need to be
> > made with Makiko's program/color scale etc. Also I would like to add
> > two maps: delete the two maps on the left (which show the effect of St
> > Helena/Lihue) and add the result when South America and Africa are
> > replace with no data, the objective being to see how these continents
> > contribute to the global mean temperature change. Clearly the data in
> > those continents is pretty lousy, but how much difference does that
> > make for the global mean?
> >
> > Jim
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Thu, 6 Sep 2007 16:08:01 -0400
To: rruedy@giss.nasa.gov
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>

On Sep 6, 2007, at 15:44, Reto Ruedy wrote:

> Jay's
> programs are in step 1 and Robert is working on it (he has trouble
> compiling one of the C programs; also the order in which stations are
> combined seems dependent on the release of the data base system)

The C programs mentioned are actually compiled C "extensions" which are used by the Python programs. I was able to install a copy of these extensions on Web2 in the spring two years ago when we managed to transfer the various GISTEMP CGI scripts from Web1 to Web2, but unfortunately I do not have any record of what special hoops I had to jump through in order to do so.

As for the database system, the Python programs save the station data in binary files using Berkeley DB. The version of BDB on the machine Jay and on the machine Web2 is different.

I have been able to get a Python script which combines station data records to run on Web2, but there are some differences in the resulting output files when compared with the files generated on Jay. I am currently trying to figure out what might be the cause of that, and whether it might be a result of the difference in BDB versions.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Thu, 6 Sep 2007 17:45:39 -0400
To: rruedy@giss.nasa.gov

I have added the following files

/gcm/GHCN/BDB/sources_and_infiles/EXTENSIONS.tar.gz
/gcm/GHCN/BDB/sources_and_infiles/EXTENSIONS_README.txt
/gcm/GHCN/BDB/sources_and_infiles/listStats.py

The listStats.py is a module required by the comb_pieces.py script and was found in the Python1.5 library directory on Jay. Since it was not also in the Python2.2 library on Web2, I assume it is not part of the Python distro and needs to be included.

Depending on the size of the files involved, anything made available on Web2 could go in the web directories or the ftp directories. If neither the output_files subdirectory nor the v2.mean file is included in sources_and_infiles, then a tarball of the directory should be fairly small.

I'm not yet convinced that the problem with comb-records.py is resulting from something out of order in the database, or that records are even being examined out of order. But I haven't actually figured anything out yet...

rbs

On Sep 6, 2007, at 16:57, Reto Ruedy wrote:

> No need to waste time on the differences - running programs on different machines gives different results, usually, of course, due to precision problems - here seemingly, because of the order things are accessed in a python library.
>
> The main thing is to collect all programs and extensions as source codes, hopefully with a script that does all the necessary compilations or with instructions on how to do it.
>
> If you can change the scripts on "jay" .../sources_and... with python extensions copied to a subdirectory of that directory so that we know what we have to copy to the web, something like that would be helpful. Also, how should it be made available - some tar-file down loadable from our website ?
>
> Reto
>
> On Thu, 2007-09-06 at 16:08 -0400, Robert B. Schmunk wrote:
>> On Sep 6, 2007, at 15:44, Reto Ruedy wrote:
>>
>>> Jay's
>>> programs are in step 1 and Robert is working on it (he has trouble compiling one of the C programs; also the order in which stations are combined seems dependent on the release of the data base system)

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from Web1 to Web2, but unfortunately I do not have any record
of what special hoops I had to jump through in order to do so.

As for the database system, the Python programs save the
station data in binary files using Berkeley DB. The version
of BDB on the machine Jay and on the machine Web2 is different.

I have been able to get a Python script which combines station
data records to run on Web2, but there are some differences in
the resulting output files when compared with the files
generated on Jay. I am currently trying to figure out what
might be the cause of that, and whether it might be a result of
the difference in BDB versions.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Thu, 6 Sep 2007 22:16:58 -0400
To: Reto Ruedy <rruedy@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>

Reto,

Earlier I noted:

> I have been able to get a Python script which combines station data records to run on Web2, but there are some differences in the resulting output files when compared with the files generated on Jay. I am currently trying to figure out what might be the cause of that, and whether it might be a result of the difference in BDB versions.

It turns out that the difference is in the version of Python installed on the computer. More specifically, it's the Python hashing function.

There are a couple places in comb_records.py where the records.items() command is used to get the separate records from the hash (or what Python calls a "dict") for a station that has multiple records. It is characteristic of a hash/dict that the items could be in any order, and it is up to the programmer to do his own sorting if it is required that the items be processed in a predictable order.

So because the hash function in Python 1.5 and 2.2 differs, when comb_records.py examines a station with multiple records and decides which records to use, the order in which those multiple records are assessed may vary and that can affect the output file.

I created a modified version of comb_records.py which always works through multiple records for a station in a predictable order (0, 1, 2, etc.). When that program was run on Jay and on Web2, the resulting output files were the same.

A similar hash ordering issue probably applies to the comb_pieces.py program.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 14:09:16 -0400
To: rruedy@giss.nasa.gov

Could you make the README in STEP1 group writeable? I'd like to revise the text a bit.

On Sep 7, 2007, at 13:33, Reto Ruedy wrote:

> Robert,
>
> I combined all source codes according to the steps I outlined in my documentation and put it on jay:/gcm/GHCN/GISTEMP_sources . Please take a look at it - I tested most pieces. Maybe you find a better way to organize the thing.
>
> The documentation "gistemp.txt" is not the final version. The whole thing is only about 5 MB.
>
> Reto
>
> On Thu, 2007-09-06 at 22:16 -0400, Robert B. Schmunk wrote:
> > Reto,
> >
> > Earlier I noted:
> >
> > > I have been able to get a Python script which combines station data records to run on Web2, but there are some differences in the resulting output files when compared with the files generated on Jay. I am currently trying to figure out what might be the cause of that, and whether it might be a result of the difference in BDB versions.
> >
> > It turns out that the difference is in the version of Python installed on the computer. More specifically, it's the Python hashing function.
> >
> > There are a couple places in comb_records.py where the records.items() command is used to get the separate records from the hash (or what Python calls a "dict") for a station that has multiple records. It is characteristic of a hash/dict that the items could be in any order, and it is up to the programmer to do his own sorting if it is required that the items be processed in a predictable order.
> >
> > So because the hash function in Python 1.5 and 2.2 differs, when comb_records.py examines a station with multiple records and decides which records to use, the order in which those multiple records are assessed may vary and that can affect the output file.
> >
> > I created a modified version of comb_records.py which always works through multiple records for a station in a predictable order (0, 1, 2, etc.). When that program was run on Jay and on Web2, the resulting output files were the same.

A similar hash ordering issue probably applies to the
comb_pieces.py program.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: draft e-mail
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 19:16:55 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <rruedy@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

<x-flowed>

Per my earlier note, the URL for "Peak Oil" is

http://pubs.giss.nasa.gov/abstracts/submitted/Kharecha_Hansen.html

In the second para about GISTEMP, should "McClintock" be "McIntyre"?
Note there is also a XX in this para that still needs to be filled in.

rbs

On Sep 7, 2007, at 18:57, James Hansen wrote:

> Here is a complete draft. The part for History is between ********s
>
> On 9/7/07, James Hansen <jhansen@giss.nasa.gov> wrote:
>
> > Here is a not quite complete draft. Jim
> >
> > On 9/7/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> >
> > > Jim,
> > >
> > > Just a couple of typos in the "Temperature Analysis Code" section:
> > >
> > > 2nd paragraph: replace "5 standard deviations are more" by ".. or more"
> > > and in the beginning of the next sentence "I compared the" by "The".
> > >
> > > Reto
> > >
> > > On Fri, 2007-09-07 at 17:50 -0400, James Hansen wrote:
> > > > here is draft e-mail. I am still writing the 'history' introduction to
> > > the program listing.
> > >
> > > "Peak Oil" Paper Revised and Temperature Analysis Code
> > >
> > > To be removed from Jim Hansen's e-mail distribution respond with
> > > REMOVE in subject line.
> > >
> > > (1) The paper "Implications of 'Peak Oil' for Atmospheric CO2 and
> > > Climate", recently revised and resubmitted to Environmental Research
> > > Letters, is available at XXXXXXXXXXX.

A principal concern of both referees was our use of a pulse-response function, fit to the Bern carbon cycle model, as opposed to a detailed carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the simplicity and transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO2 levels, in which case the strong positive feedbacks found in some climate-carbon models are less likely, and in any case such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.

We have minimized reference to a "dangerous" atmospheric CO2 level to satisfy one of the referees. We retained one reference to our recent papers, which are published in peer-reviewed journals and, we believe, make a strong case that we are already close to a dangerous CO2 level.

The principal conclusion of this paper is that it is possible to keep atmospheric CO2 at a much lower limit than commonly assumed, provided that coal use is phased out except where the CO 2 is captured and stored. This paper provides some of the rationale for the discussion in "Old King Coal II".

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document as well as practical on a short time scale the programs that produce our global temperature analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer unique functions Reto would have preferred to have a week or two to combine these into a simpler more transparent structure, but because of a recent flood of demands for the programs, they are being made available as is. People interested in science may want to wait a week or two for a simplified version.

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the choice of which stations are eliminated from the record. This is based on identifying the (small fraction of) stations that raise a red flag (e.g., deviation of 5 standard deviations are more, or a large temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest stations; if these displayed similar features the records were retained. We provide here the list of stations eliminated.

Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global temperature with and without these stations, and Figure 2 shows the global mean temperature with and without these stations. The effect is practically imperceptible and clearly insignificant.

Another favorite target of those who would raise doubt about the reality of global warming is the lack of quality data from South America and Africa, a legitimate concern. You will note in our maps of temperature change some blotches in South America and Africa, which are probably due to bad data. Our procedure does not throw out data because it looks unrealistic, as that would be subjective. But what is the global significance of these regions of exceptionally poor data? As shown by Figure 1, omission of South America and Africa has only a tiny effect on the global temperature change. Indeed, where it makes a difference it increases the temperature change by (an entirely insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the "history" introduction to the program description.

<PeakOilRevised.7Sept2007.doc>

--

Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: draft e-mail
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 19:57:59 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <rruedy@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

<x-flowed>

I have put the archived bundle of software at

http://data.giss.nasa.gov/gistemp/sources/

The archive includes two "list.of.stations" files from Makiko.

rbs

On Sep 7, 2007, at 19:41, James Hansen wrote:

> Thanks, I also need the location of the programs and list of stations removed (or, better, make the latter part of the former). Jim
>
> At 07:16 PM 9/7/2007, Robert B. Schmunk wrote:
>
> > Per my earlier note, the URL for "Peak Oil" is
> >
> > http://pubs.giss.nasa.gov/abstracts/submitted/Kharecha_Hansen.html
> >
> > In the second para about GISTEMP, should "McClintock" be "McIntyre"?
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> > > > >
> > > > > 2nd paragraph: replace "5 standard deviations are more" by ".. or more"
> > > > > and in the beginning of the next sentence "I compared the" by "The".
> > > > >
> > > > > Reto

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> in "Old King Coal II".

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flag (e.g., deviation of 5 standard deviations are more, or a large
temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest stations; if these displayed similar features the records were retained. We provide here the list of stations eliminated.

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because it looks unrealistic, as that would be subjective. But what
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makes a difference it increases the temperature change by (an
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scientific reasons, repeated here from the "history"
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<PeakOilRevised.7Sept2007.doc>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: draft e-mail
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 20:54:44 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>

<x-flowed>

I've put the PDF at

http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

I have also continued to "bloggify" copies of these mailings, including this new one, at

http://jameshansen.blogspot.com/

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 21:14:19 -0400
To: Reto Ruedy <cdrar@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

<x-flowed>

I have also added a link on the GISTEMP homepage to the
"sources" directory. The link is in the short paragraph
at the end of the Background section.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: Temp Page
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Sun, 16 Sep 2007 00:19:51 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>

<x-flowed>

A preliminary re-working of the GISTEMP homepage is at

http://data.giss.nasa.gov/gistemp/index_new.html

Although very long, it could go up as-is in place of the current GISTEMP homepage except that the links to the Columbia webpage stuff are not there yet (i.e., in the second para of the Aug 2007 update comments).

I am very concerned about linking directly to the PDFs on the Columbia webpage, whether here or on the graphs page as Makiko has already done, because it is transparent to the user that the PDFs are located on Jim's personal webpage. All they know is that they click on a link on a NASA webpage and they get a PDF. Hence the inattentive user (which would be most of them) would think the PDF is a NASA document.

So on Sunday I will try to make a pass through the PDFs and extract out the material which can be posted on a NASA webpage. I would assume this would mostly mean toning down or eliminating language re: skeptics and denialists.

Also, Makiko, I cleaned up the HTML of the "what's new" you put at the start of the graphs webpage. Is the "(a)", "(b)", "(c)" notation necessary? I left it there, but can't see that it needs to be there.

rbs

On Sep 15, 2007, at 14:53, Makiko Sato wrote:

> Reto,
>
> It means that Robert will put them on the GISS temperature front page and you will check if that is the way Jim wants?
>
> Makiko
>
> On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> > With suggested editing below, I believe that this should allow a complete version of the new front page to GISTEMP. I think that you should go ahead and replace it without waiting for me to get back from Denmark. Jim
> >
> > On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> In the description of step2 (homogeneization) "urban" should be replaced by "urban and peri-urban" or "non-rural" or we may add a sentence to indicate that "small-town" stations are adjusted the same way as urban stations. Although it is mentioned at the end of the previous section, it should probably be repeated here to avoid accusations of inconsistency.

let's use: "urban and peri-urban (i.e., other than rural)"
that makes an unambiguous definition of our categories

> April 2006 modification:
> Looking at maps based on ocean data alone, we noticed that the HadISST data (1880-1981) extended to regions containing sea ice, whereas the NOAA data (1982-present) did not. In order to get a more consistent time series, the HadISST part was restricted to the same ice-free regions as the NOAA data. Since the temperature of water containing ice is always near the freezing point, including data from such regions tends to artificially dampen any heating or cooling trend.

April 2006 modification: HadISST ocean temperatures are now used only for regions that are identified as ice-free in both the NOAA and HadISST records. This change effects a small number of gridboxes in which HadISST has sea ice while NOAA has open water. The prior approach damped temperature change at these gridboxes because of specification of a fixed temperature in sea ice regions. The new approach still yields a conservative estimate of surface air temperature change, as surface air temperature usually changes markedly when sea ice is replaced by open water or vice versa. Because of the small area of these gridboxes the effect on global temperature change was negligible.

> Reto
>
> On Fri, 2007-09-14 at 19:49 -0400, James Hansen wrote:
> > Here is new text for the Web. Some inserts and corrections are needed. The change made in April 2006 in unintelligible. As indicated,
> >
> > it needs to include links to several graphs/maps made by Makiko. Some parts of this, such as the Background probably need to be via link -- but
> >
> > perhaps these sections should start out with the first few lines and then
> >
> > .... to a link for the whole section?? All of the items in the list of changes to the analysis should be included, but perhaps just the first line
> >
> > or so then... to a link??
> >
> > Jim
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: Temp Page
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Sun, 16 Sep 2007 18:07:12 -0400
To: rruedy@giss.nasa.gov
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

<x-flowed>

The revised homepage is in place. This:

* includes Reto's suggested edits.

* links to a new webpage on the August 2007. This is just a slight rewording of the "Light Upstairs" post, but I thought it important to get it on the GISS website, because there are references in the homepage text to the figures in this post.

* links to Jim's website re: Usufruct & the Gorilla, but I explicitly identify this as going to Jim's personal webpage. When time permits, we should try to shift applicable content from this post in an update page on the GISS website.

* modifies the webpage layout so that the block of six image links are now a strip down the side of the page. I did this to get the start of the text up at the top of the webpage, and perhaps get more people to actually read some of it.

rbs

On Sep 16, 2007, at 14:45, Reto Ruedy wrote:

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September 2007: The ... through 2005). In this newer version, NOAA removed or corrected a number of station records before year 2000. Since these changes included most of the records that failed our quality control checks, we no longer remove any USHCN records. *) Our quality control is still applied to the non-USHCN stations and is described by Hansen et al.(2001). A list of all station records removed by it is provided. The effect ... *)

(No changes in the first and the last sentence)

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Reto

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> Great. It is not so long as I feared, let's use it this way. In the August 2003 item put "station data" where it presently says "station". In the August 2007 item replace the sentence "We provide here..." with Graphs showing the effect of this change on U.S. and global temperature are available here.
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> >
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> > Although very long, it could go up as-is in place of the current GISTEMP homepage except that the links to the Columbia webpage stuff are not there yet (i.e ., in the second para of the Aug 2007 update comments).
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be most of them) would think the PDF is a NASA document.

So on Sunday I will try to make a pass through the PDFs and extract out the material which can be posted on a NASA webpage. I would assume this would mostly mean toning down or eliminating language re: skeptics and denialists.

Also, Makiko, I cleaned up the HTML of the "what's new" you put at the start of the graphs webpage. Is the "(a)", "(b)", "(c)" notation necessary? I left it there, but can't see that it needs to be there.

rbs

On Sep 15, 2007, at 14:53, Makiko Sato wrote:

> Reto,
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> It means that Robert will put them on the GISS temperature front page
> and you will check if that is the way Jim wants?
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> > With suggested editing below, I believe that this should allow a
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> > and replace it without waiting for me to get back from Denmark. Jim
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> > >
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> > > by "urban and peri-urban" or "non-rural" or we may add a sentence to
> > > indicate that "small-town" stations are adjusted the same way as
> > > urban
> > > stations. Although it is mentioned at the end of the previous
> > > section,
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of
inconsistency.

let's use: "urban and peri-urban (i.e., other than rural)"
that makes an unambiguous definition of our categories
April 2006 modification:
Looking at maps based on ocean data alone, we noticed that
the
HadISST
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and HadISST
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in which
HadISST
has sea ice while NOAA has open water. The prior approach
damped
temperature change at these gridboxes because of
specification of
a fixed
temperature in sea ice regions. The new approach still
yields a
conservative estimate of surface air temperature change, as
surface air
temperature usually changes markedly when sea ice is
replaced by
open water
or vice versa. Because of the small area of these
gridboxes the
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global temperature change was negligible.
Reto

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> > > > needed. The change made in April 2006 in unintelligible.
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> > > > Jim
> > > > --
> > > > Reto Ruedy <rruedy@giss.nasa.gov>

> > > --
> > > Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> > > NASA Goddard Institute for Space Studies, 2880 Broadway, New
> > > York, NY
> > > 10025

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

</x-flowed>

Subject: Re: Temp Page
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Mon, 17 Sep 2007 14:24:48 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>

<x-flowed>

Jim,

You apparently tried to reload "index_new.html", the file that
I prepared on Saturday.

You should now go to the "real" GISTEMP address

http://data.giss.nasa.gov/gistemp/

rbs

On Sep 17, 2007, at 13:41, James Hansen wrote:

> sounds good, but when I try to look at it I get the message:
> Siden blev ikke fundet
> Den side, du søger efter, er fjernet, navnet er ændret, eller den er midlertidigt
> ikke-tilgængelig.
> Prøv følgende:
>
> Hvis du har skrevet sidens adresse i adresselinjen, skal du sørge for, at adressen
> er stavet korrekt.
> Åbn data.giss.nasa.gov hjemmesiden og søg efter links til de oplysninger, du vil
> have.
> Klik på knappen Tilbage for at prøve et andet hyperlink.
> Klik på Søg for at søge efter oplysninger på Internettet.
>
> HTTP 404 - Filen blev ikke fundet
> Internet Explorer
>
> On 9/17/07, Robert B. Schmunk <Robert.B.Schmunk@nasa.gov> wrote:
> The revised homepage is in place. This:
>
> * includes Reto's suggested edits.
>
> * links to a new webpage on the August 2007. This is just a slight
>   rewording of the "Light Upstairs" post, but I thought it important
>   to get it on the GISS website, because there are references in the
>   homepage text to the figures in this post.
>
> * links to Jim's website re: Usufruct & the Gorilla, but I
>   explicitly identify this as going to Jim's personal webpage.
>   When time permits, we should try to shift applicable content
>   from this post in an update page on the GISS website.
>
> * modifies the webpage layout so that the block of six image links
>   are now a strip down the side of the page. I did this to get the

start of the text up at the top of the webpage, and perhaps get more people to actually read some of it.

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> (No changes in the first and the last sentence)
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>>
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>> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
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Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
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</x-flowed>

Subject: Re: web page
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Tue, 18 Sep 2007 18:13:42 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: @gmail.com>, Reto Ruedy <rruedy@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>

I think Jim is referring to a sentence at the end of the Sept 2007 paragraph in the "updates to analysis", where it says, "The effect of station removal on analyzed global temperature is very small, as shown by graphs and maps available here." That should apparently link to the graphs page, so I have added the missing link.

rbs

On Sep 18, 2007, at 18:06, Makiko Sato wrote:

> What data comparison? The comparison due to the newest change, i.e. USHCN from 2000 to current version, is still there. I wrote "Tables: Global, US" in a separate line below the graphs, but now Robert changed to "Also see tables of comparisons for <http://data.giss.nasa.gov/gistemp/graphs/GLB_USHCN.2005vs1999.txt>globe and <http://data.giss.nasa.gov/gistemp/graphs/US_USHCN.2005vs1999.txt>US-only." as an additional sentence, so you may have not noticed it.
>
> Otherwise, I don't remember the data comparison. I can make such things for USHCN/GHCN problem fixing.
>
> Makiko
>
> At 17:52 2007/09/18, wrote:
> > At one point on the web page I note that it says a data comparison is available "here", but it is not avialable. Jim

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Tue, 18 Sep 2007 18:22:05 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, rruedy@giss.nasa.gov

Makiko has a couple on the Graphs page.

On Sep 18, 2007, at 18:16, James Hansen wrote:

> If there are any links to them other than the one where it is described as to my personal Columbia web page, the additional ones should be removed.
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> On 9/18/07, Makiko Sato <makis@giss.nasa.gov> wrote:
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> > Jim,
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> > I have a feeling that many people don't like your "A Light On Upstairs?" and "Usefruct & the Gorilla". They are more your opinions than to show the effects of the changes (science). So, I thought we'd better have links only to graphs and maps I created for these write-ups, from GISS temperature first page and also from the Graphs section. But on the other hand, I don't like to keep changing things now (this way and that way listening to others opinions). What do you think?
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> > Makiko

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Tue, 18 Sep 2007 18:59:31 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

Since the other CU webpage links have been removed from the Graphs page, should the link to the "Peak Oil Paper Revised and Temperature Analysis Code" still be there?

rbs

On Sep 18, 2007, at 18:49, Makiko Sato wrote:

> If I add too many graphs and maps, the original meaning of this page will be lost. So I removed the CU links (not the one talking about the source code release) but added links to graphs and maps (not show them on this page) except the most recent changes.
>
> Makiko
>
> At 18:43 2007/09/18, James Hansen wrote:
>> o.k.
>>
>> On 9/19/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
>> Jim,
>>
>> Shall I remove the links to these and add a set of graphs and two sets of maps directly on this page? <http://data.giss.nasa.gov/gistemp/graphs>http://data.giss.nasa.gov/gistemp/graphs
>>
>> Makiko
>>
>>
>> At 18:22 2007/09/18, Robert B. Schmunk wrote:
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>> >Makiko has a couple on the Graphs page.
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Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
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CC: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

On Sep 18, 2007, at 19:05, Makiko Sato wrote:

> Do we talk about the release of the temperature analysis code (which was of most interest to those annoying ones) clearly in the first page http://data.giss.nasa.gov/gistemp/? I couldn't find it easily, and that's why I kept the peak oil stuff in.

There is a link to the code download page at the end of the "current analysis method" section on the GISTEMP homepage.

> How can I rotate the maps? http://data.giss.nasa.gov/gistemp/graphs/email.070907.maps.pdf, http://data.giss.nasa.gov/gistemp/graphs/UStop4.pdf and http://data.giss.nasa.gov/gistemp/graphs/UStop4.pdf. Right now people should rotate their necks.

I have already rotated the files for you. I did it on my Mac as I don't use convert often enough to remember the appropriate command line arguments.

rbs

> At 18:59 2007/09/18, Robert B. Schmunk wrote:
>
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Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
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Subject: USHCN, GHCN matching
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 07 Aug 2007 12:48:18 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, klo@giss.nasa.gov

Jim, Reto, Ken,

I put a graph which shows the US and global mean temperature change due to matching 1990-1999 mean USHCN and GHCN on
http://www.giss.nasa.gov/~makis/GISS_Temp/
User ID = Password =

Makiko

Subject: Re: USHCN, GHCN matching
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 07 Aug 2007 13:22:54 -0400
To: rruedy@giss.nasa.gov
CC: jhansen@giss.nasa.gov

Yes, I will redo all graphs and tables on GISTEMP Graphs page.

Makiko

At 12:51 2007/08/07, you wrote:
> Makiko,
>
> Thanks - I assume, you will also replace all affected graphs on the
> GISTEMP website.
>
> Reto
>
> On Tue, 2007-08-07 at 12:48 -0400, Makiko Sato wrote:
> > Jim, Reto, Ken,
> >
> > I put a graph which shows the US and global mean temperature change
> > due to matching 1990-1999 mean USHCN and GHCN on
> > http://www.giss.nasa.gov/~makis/GISS Temp/
> > User ID Password =
> >
> > Makiko
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FETCH REFERENCE
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 8 Aug 2007 21:19:03 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Jim,

I will try more in my office tomorrow. The internet connection is very slow here today, and it was difficult to find anything without a reasonable speed. Since the Asahi interviewers are nit coming tomorrow, Even so, I could update Rest of Europe, Rest of the World through 2006, etc

Makiko

On 8/8/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> I already did, following the same path as you did. Perhaps Darnell or Zoe can figure out how to get an electronic copy of the indicated paper. Jim
>
> On 8/8/07, Makiko Sato <makis@giss.nasa.gov> wrote:
>
> > Jim,
> >
> > I went to Astrophysical Journal page through Columbia e-journal, and then I got
> >
> > Available Issues
> > Journal: 2007 |2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996
> > Letters: 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 | 1995
> > Supplement: 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996
> > Issues of The Astrophysical Journal, The Astrophysical Journal Letters, and The Astrophysical Journal Supplement Series on this site that are more than two years old, are available without a subscription. Issues from 1996 and earlier are freely available from the NASA Astrophysics Data System service.
> >
> > So I clicked on NASA Astrophysics Data System service, and I put "Astrophysical Journal" in the Search box, but didn't get to anywhere.
> >
> > Would you like to try yourself?
> >
> > Go to http://www.columbia.edu, Libraries, e-journals, need your UNI and password.
> >
> > Makiko
> >
> > On 8/8/07, James Hansen < jhansen@giss.nasa.gov> wrote:
> >
> > > Makiko, I have spent a lot of time trying to access this article electronically -- perhaps you can figure out how to get it. Jim
> > >
> > > DKIM-Signature: a=rsa-sha1; c=relaxed/relaxed; d=gmail.com; s=beta;
> > > h=domainkey-signature:received:received:message-id:date:from:sender:to:subject:mime-version:content-type:x-google-sender-auth;
> > > b=oNTyFzbgvNoyyyuHVB/DPTHBWmL6QgzFAgrFVVdeK08ftL+q7CZKCNvUQCyR/cnbBCB+RnomljbYrNcChlj6aDyO9AtMWAFjlZEFvNoPUg5/sXpRhBQ//N/z8gHKi5ribR9UiltI+EG60BJkIRJKkG/59lZFblRjvXpsj3vT8PI=
> > >
> > > DomainKey-Signature: a=rsa-sha1; c=nofws; d= gmail.com; s=beta;
> > > h=received:message-id:date:from:sender:to:subject:mime-version:content-type:x-google-sender-auth;
> > > b=py3xl2Kgf9I6N9bgTiGi0oA/Pw+chdF6bK3PvsrziewUVmCZgRtavOJWHy28njGjg0/NwDN5xxZxUkO1A8sW+Kzq5JHPKk0QYH0b4b5Hq7Nl5AY63kYKAiTAovcPR41IR5ISxiU6LqZzw962BtWPxM3J4HPmHKkWZRrxfDgkq6M+

Date: Wed, 8 Aug 2007 16:20:11 -0400
From: "James Hansen" <jhansen@giss.nasa.gov>
Sender: jhansen.giss@gmail.com
To: "James Hansen" <jhansen@giss.nasa.gov>
Subject: FETCH REFERENCE
X-Google-Sender-Auth: c02db27cab3ed61e

---------- Forwarded message ----------
From: Richard Stothers <rstothers@giss.nasa.gov >
Date: Jul 25, 2007 7:44 PM
Subject: Re: solar luminosity
To: James Hansen <jhansen@giss.nasa.gov >
Cc: Richard Stothers <rstothers@giss.nasa.gov >

Jim,

The past evolution of the Sun's luminosity depends on certain assumptions. For example, if the Sun had been slightly more massive in the past and had slowly lost mass, its previous luminosity need not have been significantly lower than today. However, on the standard assumption of a constant mass, the Sun's luminosity 4.5 Gyr ago was 0.70 of today's value.

The increase of L with time is very nearly linear -- you might take a look at the log(L) vs. t plot in Fig. 4 of Sackmann et al. (1993, Astrophys. J., 418, 457-468) and the accompanying text in Section 3.2.2. This is a standard reference, although many other references could be cited giving the same result. But this particular reference also calculates the evolution of the Sun far into the future.

Dick

At 03:16 PM 7/25/2007 -0400, you wrote:

> Dick,
>
> Do you know the most appropriate scientific reference for the trend of solar luminosity? It is commonly assumed that it was about 6% less at the time of the last snowball Earth, about 540 million years ago. Can I assume that it is increasing at a rate of about 10% per billion years, and that this might be about right for the last couple of billion years and perhaps the next billion? Thanks for any insight.
>
> Jim

Subject: Re: temperature data
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Thu, 9 Aug 2007 10:05:34 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Makiko

On 8/9/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> As an alternative to attempting to reconstruct the origins of all station records in the present analysis, is it easier to use current GHCN data per se and show that the difference that causes in global result is negligible?
> Jim

Subject: US and global temperature graphs
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 15:00:27 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

Jim, Reto

I made the graphs and put them on http://www.giss.nasa.gov/~makis/GISS_Temp/. If you have corrections or suggestions, please let me know.

Makiko

Subject: Re: Fwd: Request
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 15:54:35 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

At 11:23 2007/08/10, you wrote:

> Reto,
>
> I am being besieged by e-mails and calls about this, so we need to do something promptly, as there will be stories written today for publication tomorrow. Let me know what the chances are that you will be able to have the comparative global temperature curves that we discussed yesterday.
>
> By the way, Makiko, do you remember if we ever make any statement about how different years ranked for the United States temperatures? There are several demands that we issue a press release correcting our wrong results and declaring that 1934 is now the warmest year on record in the U.S., also that 4 of the 10 warmest years were in the 1930s and only 3 in the last 10 years.

Let's try to remember what statements we made about US temperature

(1) In our 2001 paper
GISS 1934 warmest, USHCN 1998 warmest, difference being a few hundredths of a degree

(2) Summation
2001-2003, only global T
2004 US for 1950-2003 (no 1934)
2005-2006, global and low latitudes

(3) In January 2007, I showed on my "Some Extra" page which most people don't look
1934 1.23, 1998 1.24 and 2006 1.23

We made rankings to the public only for the global mean. NOAA ususally does for the US.

Makiko

Subject: Re: New Email
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:18:16 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Are the figures too large or too small? If I make them slightly larger, the US one gets onto the 2nd page. Makiko At 15:54 2007/08/10, you wrote: >o.k., here is the draft e-mail, which needs the figures and links -- >I am so it is hard to read right now. Jim >Content-Type: application/msword; name="LightUpstairs.10Aug2007.doc" >Content-Disposition: attachment; filename="LightUpstairs.10Aug2007.doc" >X-Attachment-Id: f_f573l7lw Attachment Converted: "c:\program files\qualcomm\eudora\attach\LightUpstairs.070810.doc"

A Light On Upstairs?

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Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down. This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

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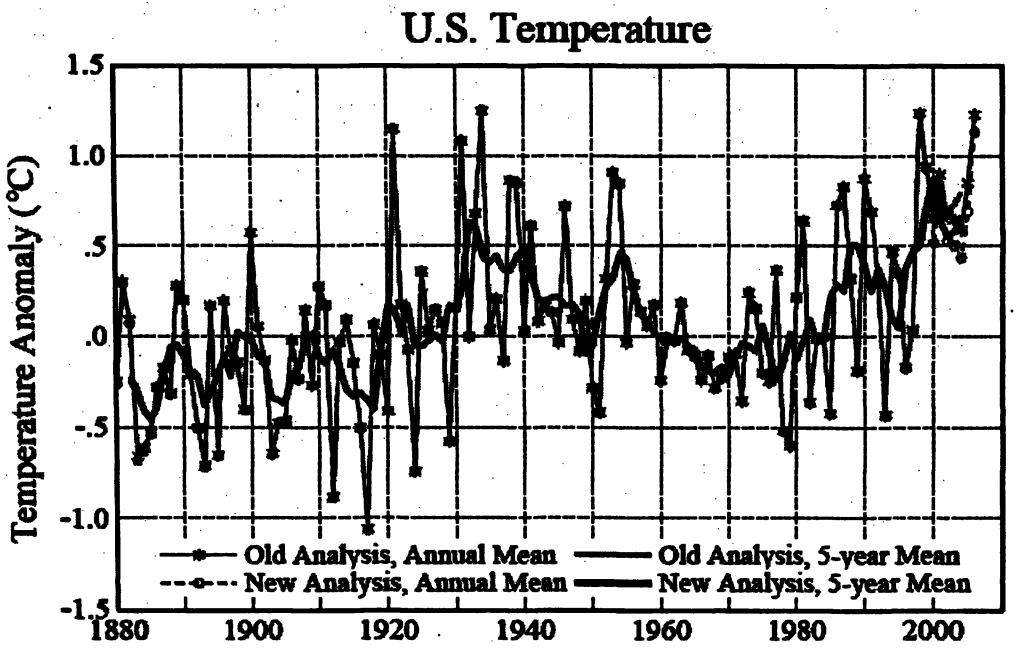

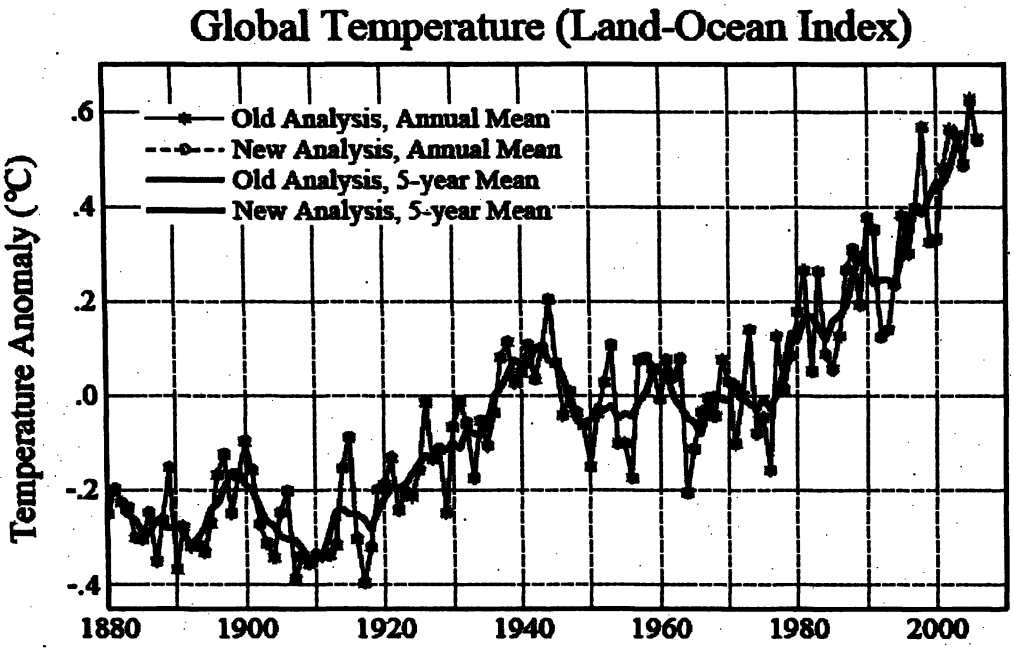

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I am always a bit puzzled by the views that seem to come from conservative extremes, a bit disconcerting as I come from a moderately conservative state and consider myself a moderate conservative in most ways – puzzling because it seems to me that conservatives should be the first ones standing up for preserving Creation and for the rights of the young and the unborn. After all, that is the basic intergenerational issue in global arming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem.

Jim

Subject: Fwd: Re: New Email
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:26:04 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: rruedy@giss.nasa.gov

Robert,

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Makiko

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> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: Re: New Email
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>
> Makiko
>
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> > X-Attachment-Id: f_f573171w

LightUpstairs.070810.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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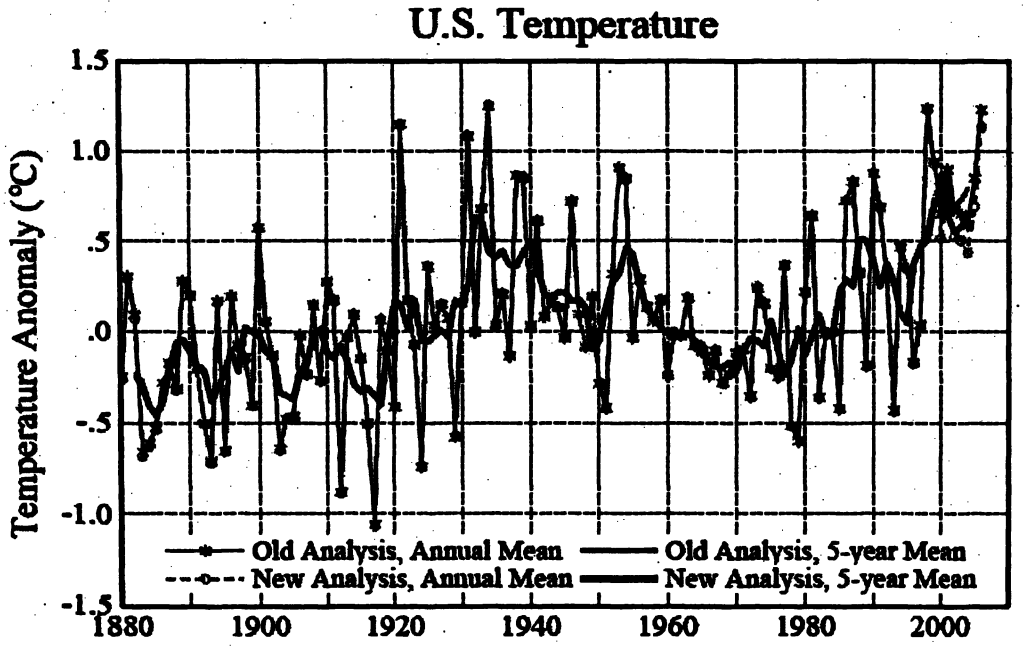

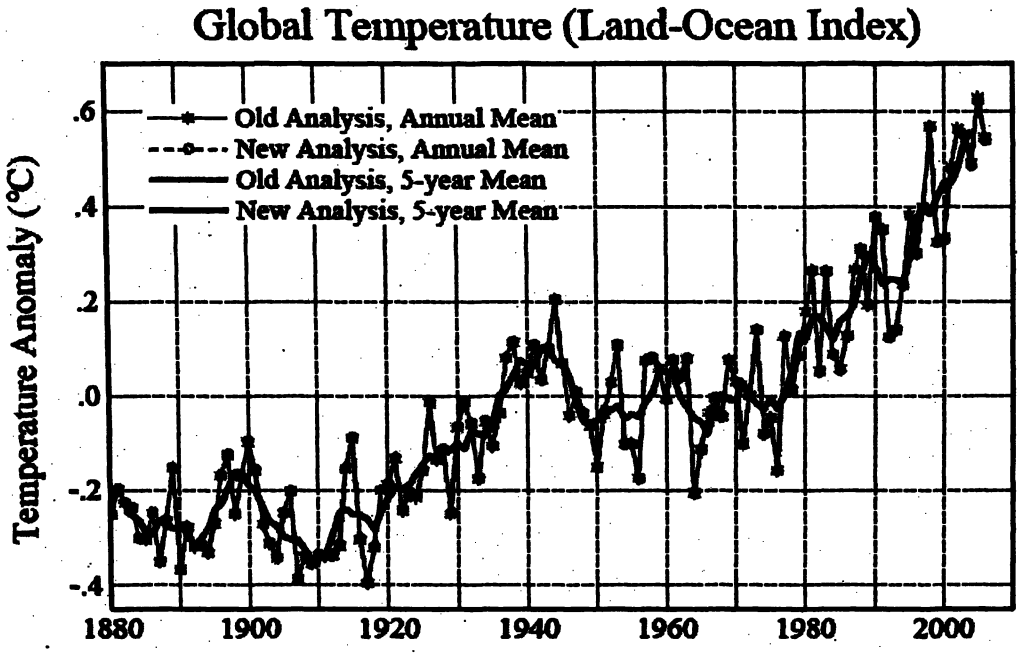

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Jim

Subject: Re: Fwd: Re: New Email
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:43:01 -0400
To: rruedy@giss.nasa.gov
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, jhansen@giss.nasa.gov

Thank you, Reto. I fixed it.

Makiko

At 16:35 2007/08/10, Reto Ruedy wrote:

> Makiko,
>
> In the second to the last paragraph a "w" seems to be missing; 'global arming' is bad also, but I think it meant to be global warming.
>
> Reto
>
> On Fri, 2007-08-10 at 16:26 -0400, Makiko Sato wrote:
> > Robert,
> >
> > I sent this to Jim and he said he would read it once more. Do you
> > want to change the links? If I hear from him, I will convert to a
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> >
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> > >Date: Fri, 10 Aug 2007 16:18:16 -0400
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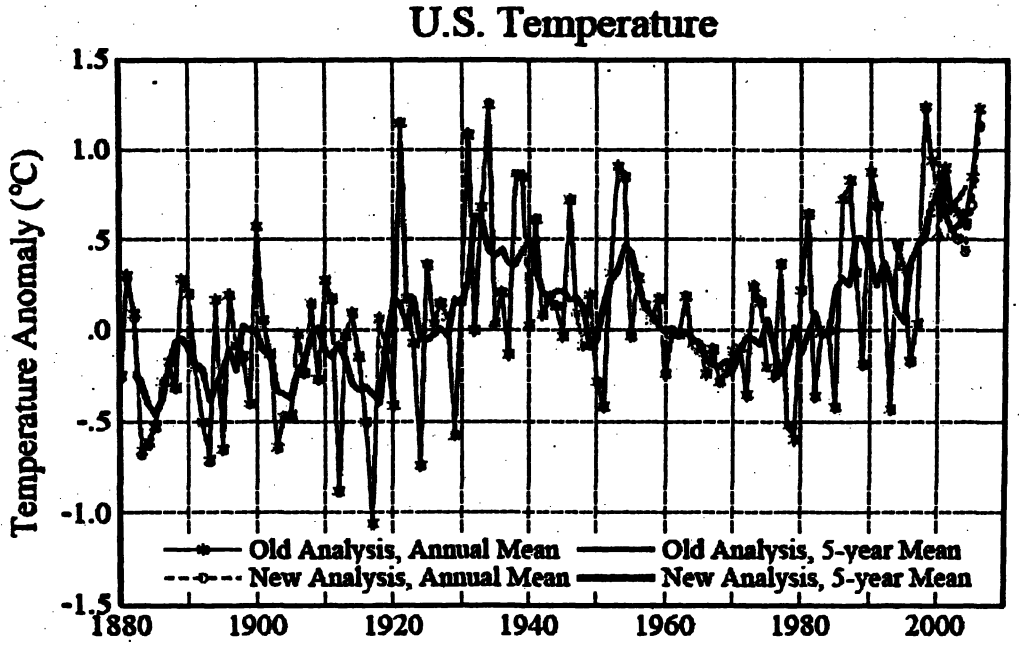

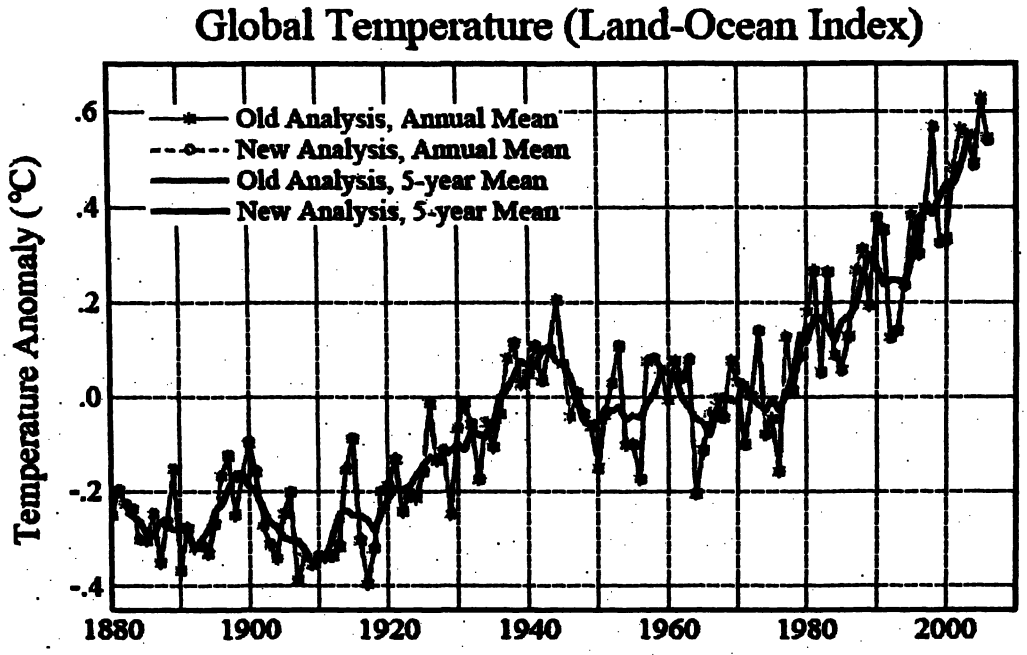

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Jim

Subject: Re: New Email
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:53:30 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

Robert,

At 16:43 2007/08/10, Robert B. Schmunk wrote:

> Makiko,
>
> I generally prefer that when people link to docs on the website
> that you use the HTML page which has the "Download PDF" link
> rather than point directly at the PDF file itself.

I don't understand this part. This is a Word file not HTML.

> The word "are" all caps in the third paragraph out to be changes
> to lower case and put in bold. Being in all caps right now and
> close to the abberviation GHCN, it almost looks like it too is an
> abbrevaation.

Jim,

Please read this remark of Robert's and make the change unless you really want it to be ARE.

> When I view the Word DOC there is no degree sign in 0.15 deg-C.
> Is that intentional?

I think SI unit doesn't have degree symbol, so just 0.15C, but I think it is clearer to have the usual small circle high up or write down deg. Jim made it 0.15C, so maybe he is using the SI unit.

> The phrase "order one-thousands" should be "order one-thousandth".

Yes, you are right. I will make the change.

> rbs
>
> On Aug 10, 2007, at 16:35, Reto Ruedy wrote:
>
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> >
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> --
> Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

A Light On Upstairs?

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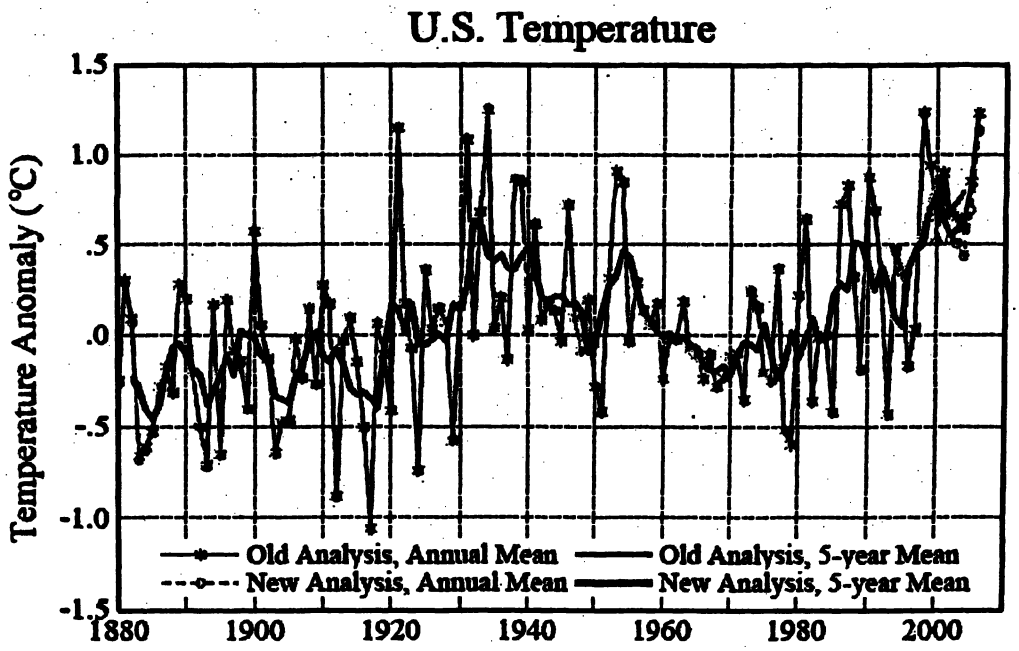

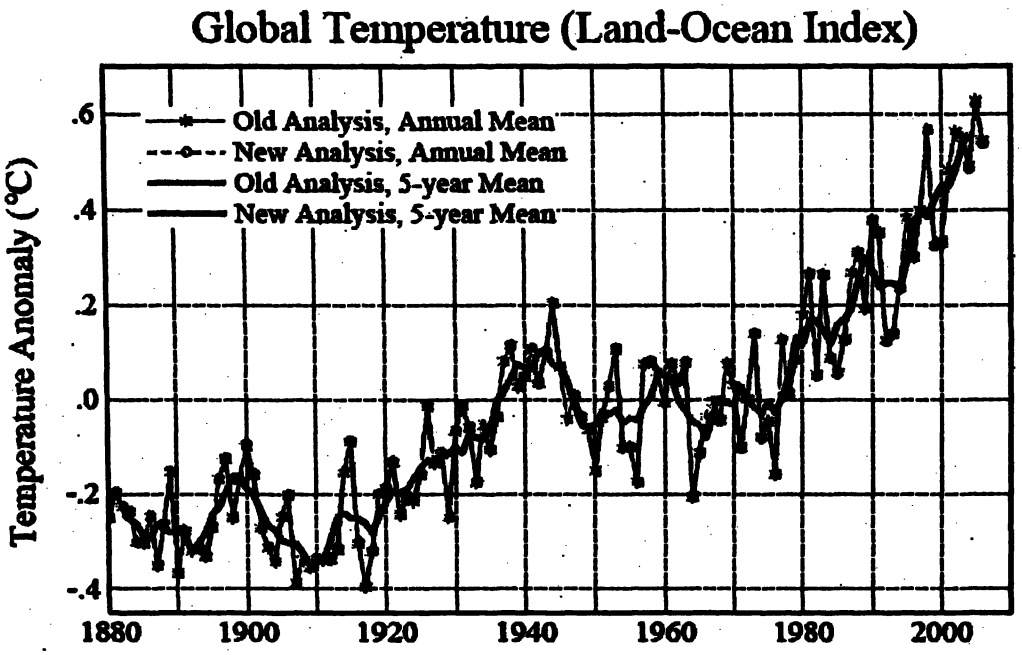

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My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem.

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From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 17:33:45 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov

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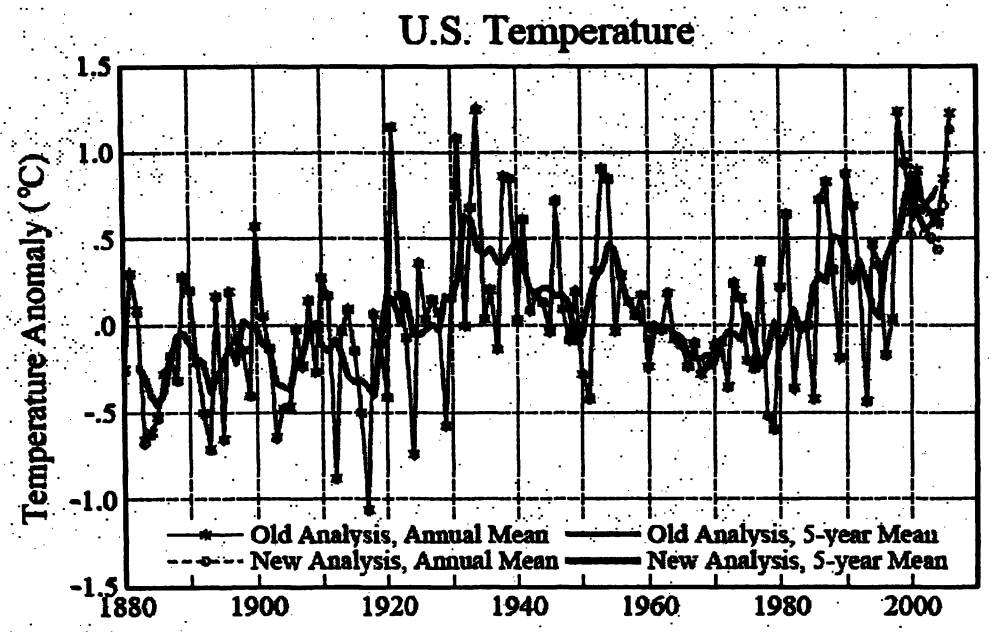

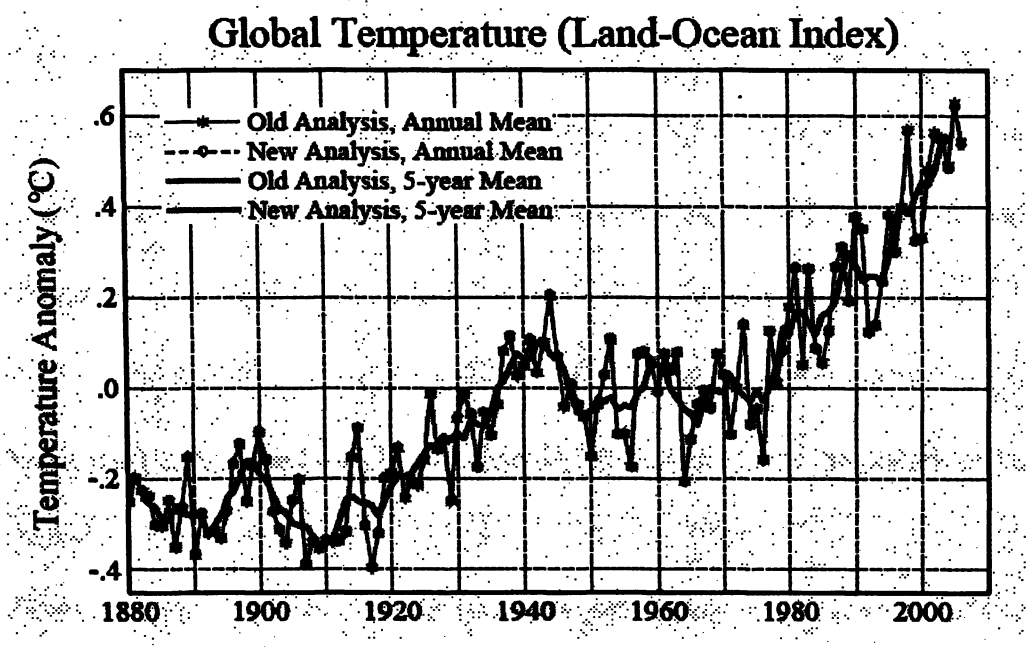

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CC: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, rruedy@giss.nasa.gov

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Subject: A Light On Upstairs?
From: James Hansen <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 18:27:31 -0400
To: jhansen@giss.nasa.gov
CC: jhansen@giss.nasa.gov

To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject but this line should be included in the e-mail.

LightUpstairs.10Aug2007-x.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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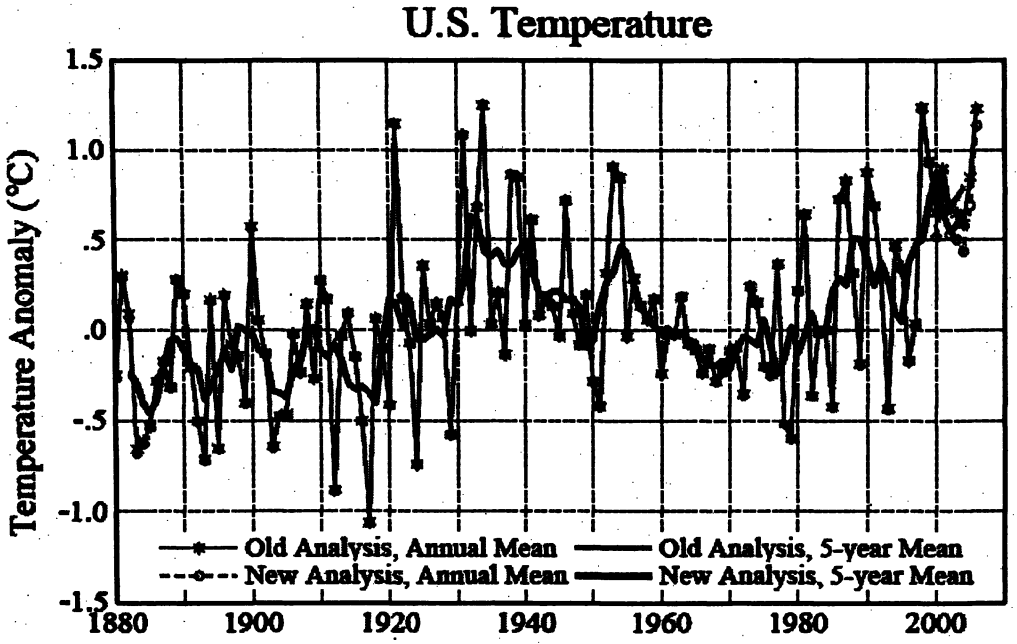

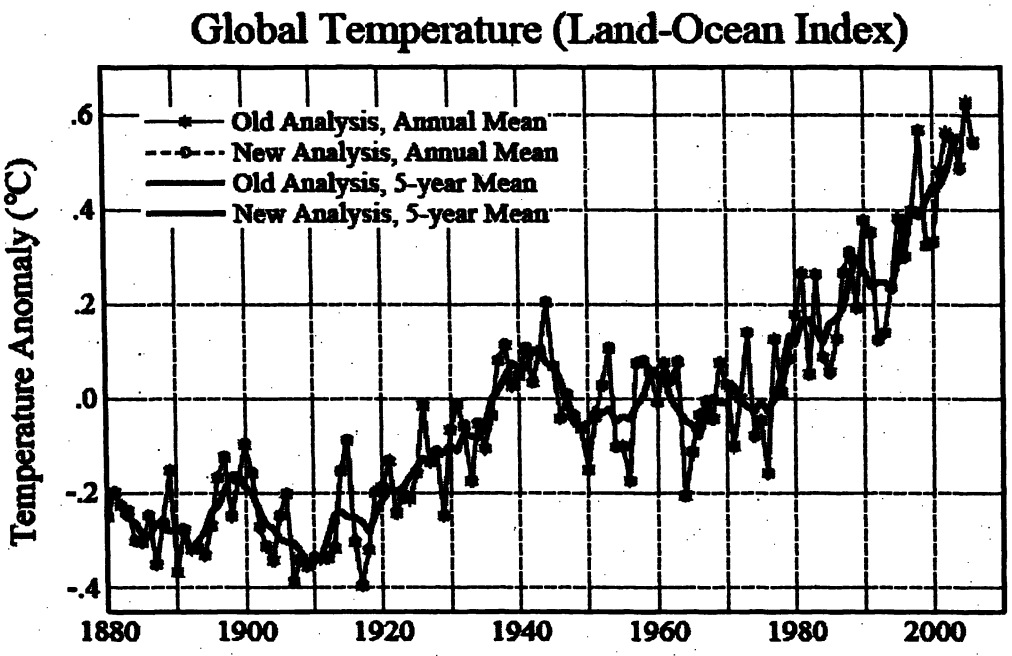

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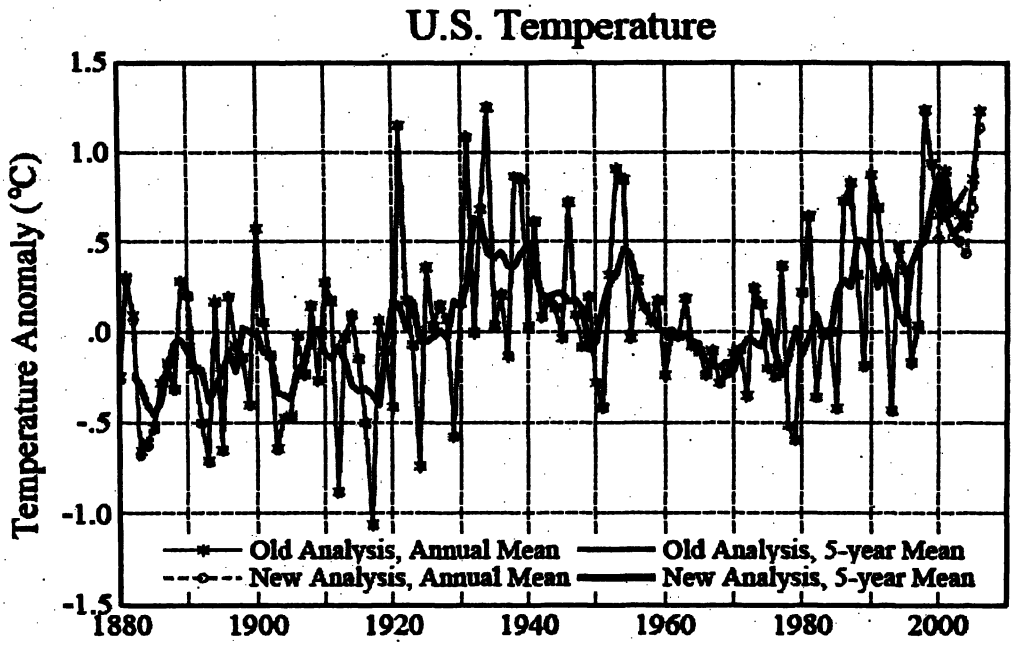

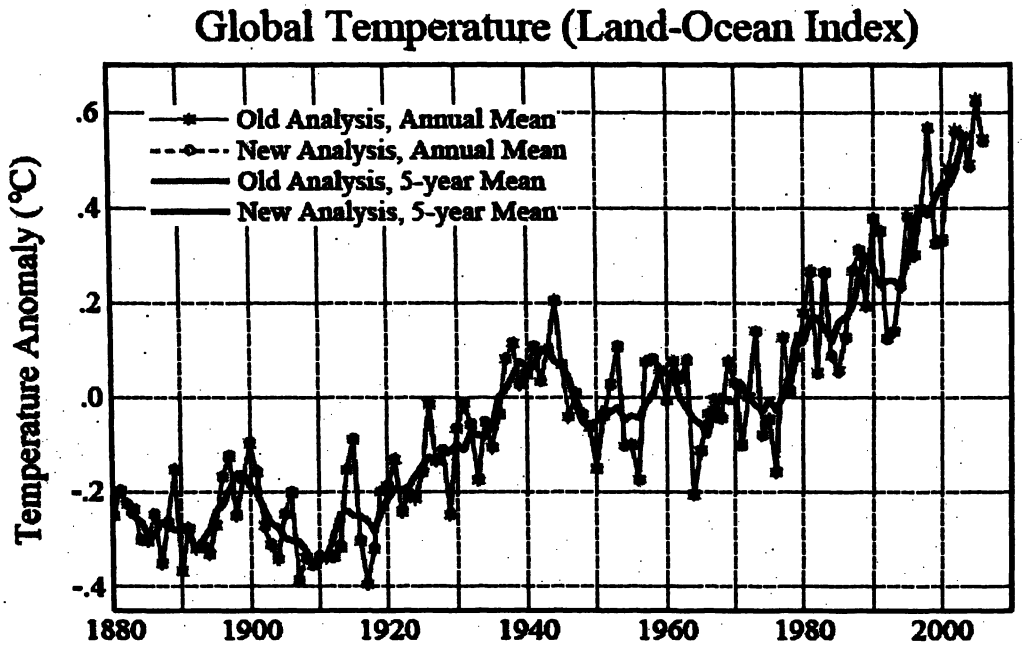

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> http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
>
> rbs
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Content-Disposition: attachment; filename="LightUpstairs.10Aug2007.doc"
X-Attachment-Id: f_f573171w
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Robert B. Schmunk,
<mailto:Robert.B.Schmunk@nasa.gov> Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
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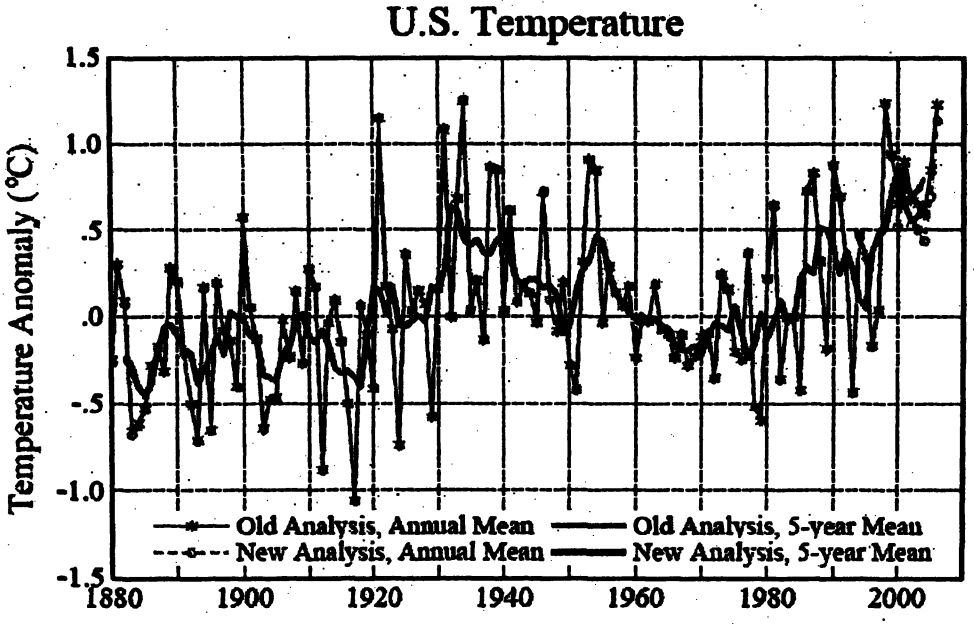

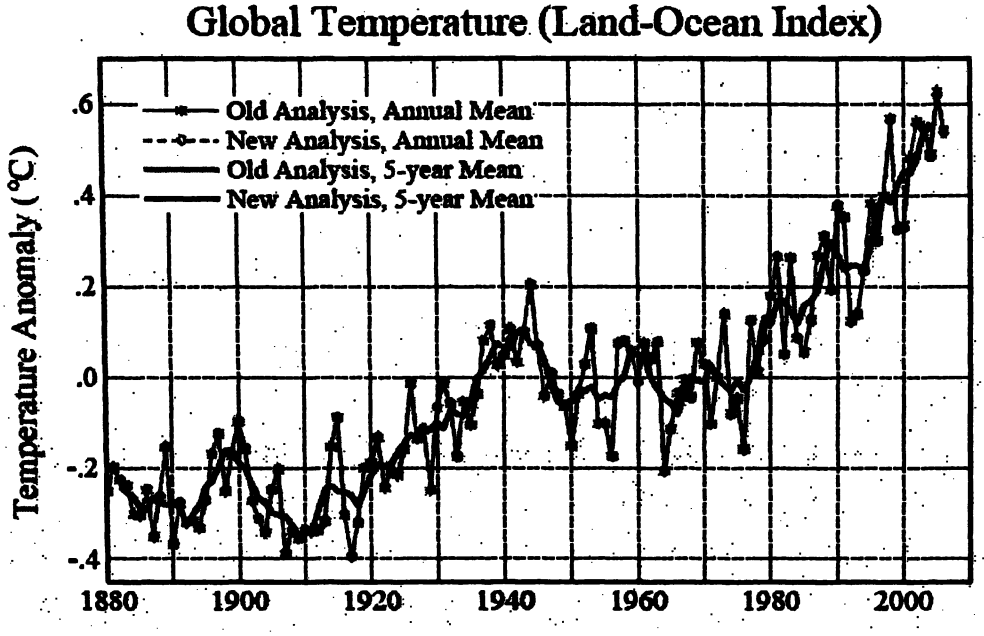

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Jim

Subject: Re: New Email
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 10 Aug 2007 18:36:58 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

It's not us. NOAA has T(2006) > T(1998) > T(1934) for the US, of course very slightly. http://www.noaanews.noaa.gov/stories2007/images/usa-temps-1895-2006b.jpg
Why do people want to make ranking among 1934, 1998 and 2006 US temp?

Makiko

At 18:22 2007/08/10, James Hansen wrote:
Thanks to all of you for the rush job! -- I think that it is very clear. Jim

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<<mailto:Robert.B.Schmunk@nasa.gov>Robert.B.Schmunk@nasa.gov> wrote:

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<mailto:Robert.B.Schmunk@nasa.gov>Robert.B.Schmunk@nasa.gov
>>>>>> NASA Goddard Institute for Space Studies, 2880 Broadway, New
>>>>>> York, NY
>>>>>> 10025
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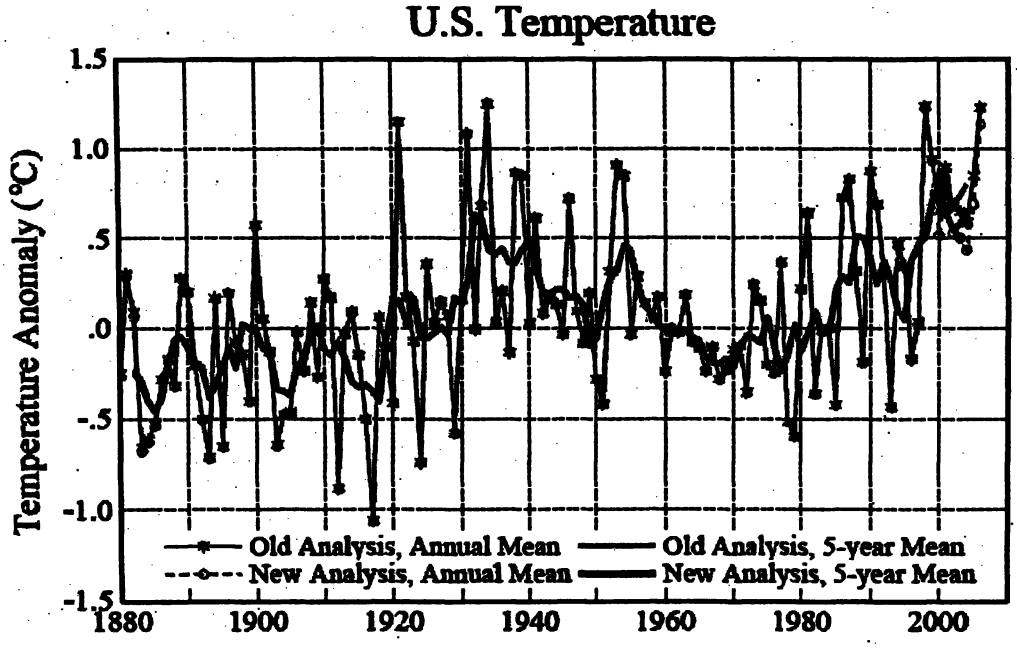

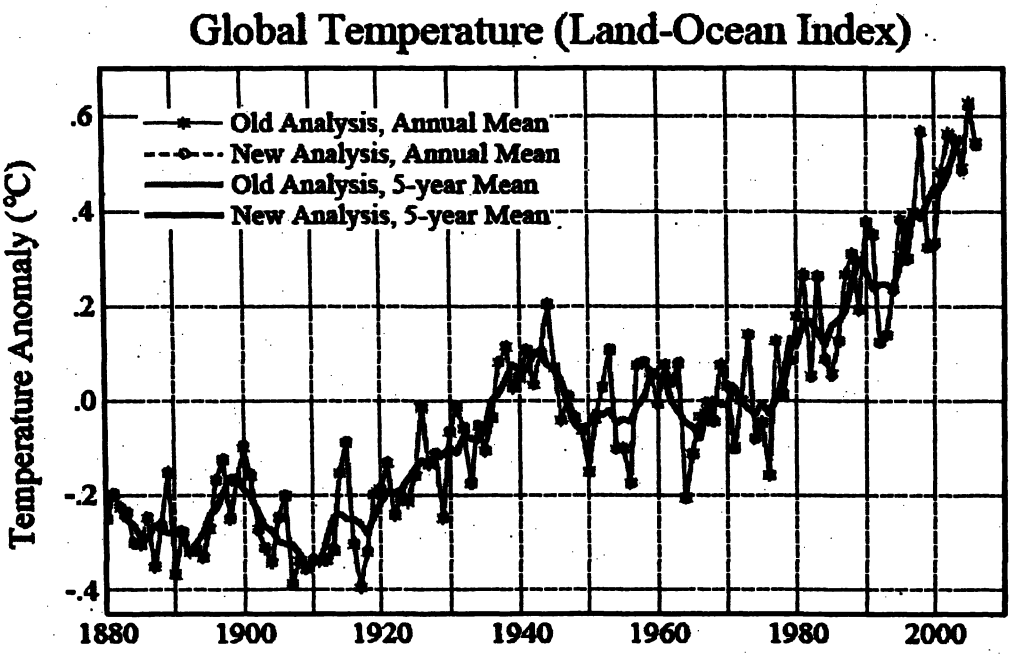

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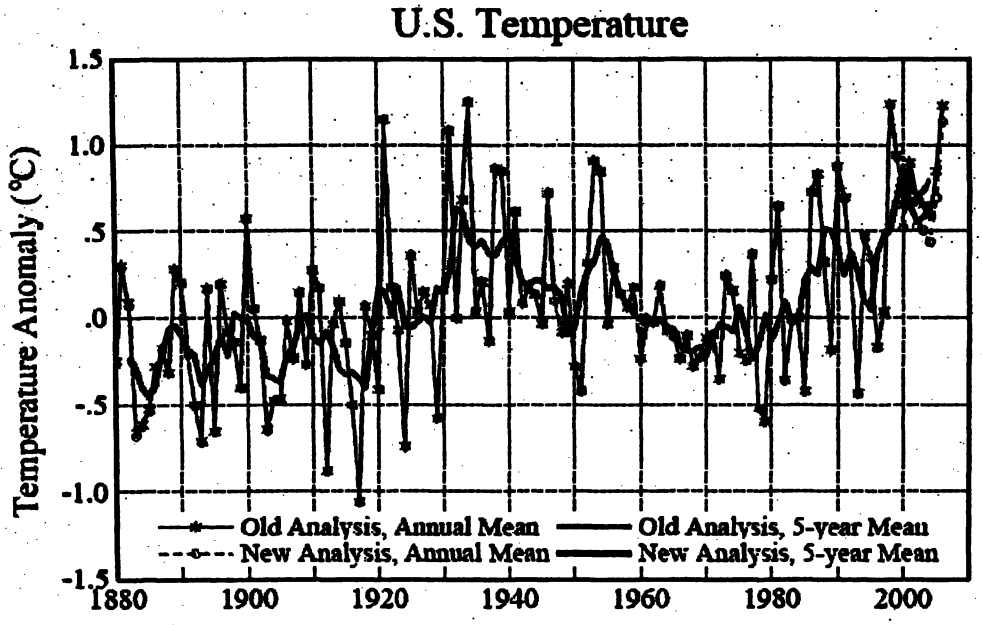

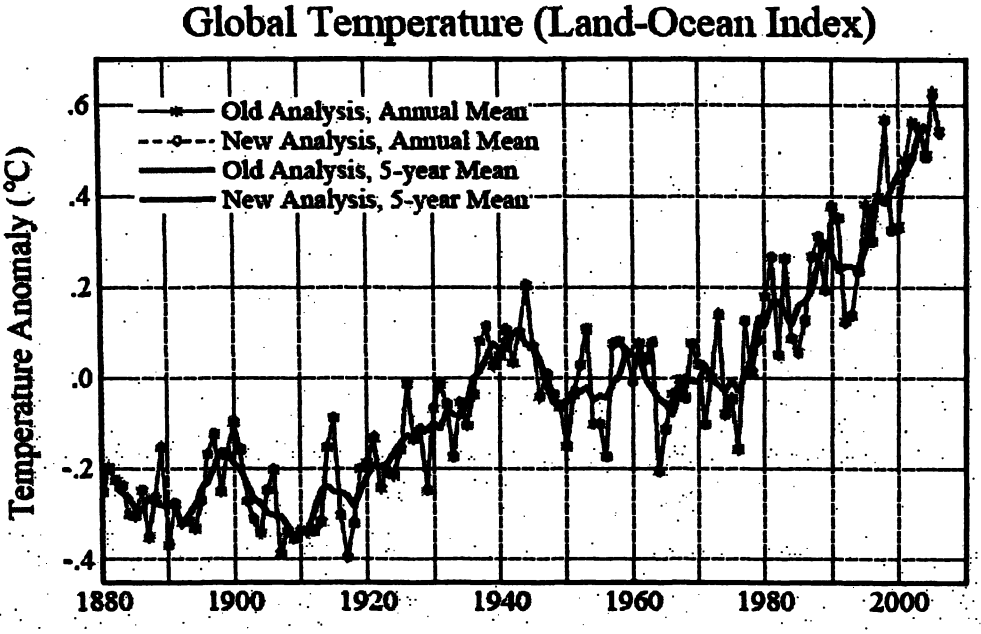

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Subject: Re: Fig A2
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sun, 12 Aug 2007 12:57:50 -0400
To: rruedy@giss.nasa.gov
CC: gs210@columbia.edu, jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov

Reto,

On Tuesday, using your new corrected data for the US temperature through July 2007, I updated the maonthly line graph, the set of the monthly maps, the US mean line graph and one extra set of 2007 vs. 1998 and 2005 line graph and maps (there are some people interested in this extra one and I sometimes get some e-mail about this, but I can remove it if you think it is no appropriate), but Makoto was sick and I didn't come in on Wednesday, Thursday Jim wanted me to do somethig else, and Friday as you know we were crazy for Jim's e-mail, so

I didn't have a chance to update annual mean data shown in Fig.A or Fig.A2, thinking the difference betwenn the original and corrected must be less than 0.01 degrees, but because of that correction together with the additional data (7 months difference in the whole data set may not be 7 months only for some stations), it is possible that the change from what I made in January, 2007 and your new table is 0.01 or more. I will update Fig.A.txt and Fig.A2.txt tomorrow.

Makiko

On 8/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Gavin,
>
> It took me a while to solve the mystery of small differences between plots and tables, since both products are created from the same binary data set. Here is the solution:
>
> My program produces the tables (txt files) with nint(100*data) and the plot files with "write F9.3" from the same data.
>
> Makiko then rounds the plot file from 3 to 2 digits (F9.2) which is reasonable given the margin of error. Had I used F12.6, the number of differences would be almost zero, had I used F9.2 there would be no differences.
>
> I used F9.3 because occasionally I was asked whether a small change was increased or decreased by roundoff - but I'll gladly change to F9.2 for future updates.
>
> What I think would be more beneficial is to add (as we do in 1 isolated instance) an estimated margin of error to all our tables and plots, indicating how much we trust these numbers. It is a little complicated by the fact that they are a function of time, but giving one number for the early period and a second number for the last few decades should be sufficient.
>
> I also think it would pay to take a look at the "graphs" section, drop or add some displays, and add to each display a small text indicating what we can (or cannot) learn from it, why one would be interested in it. Right now, it looks to me more like a random selection of graphs with a few maps thrown in for good measure.
>
> Reto

On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:

Reto, there are small (0.01) difference between the current Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt. Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these be reconciled to prevent any further confusion. I know it's small, but people are now looking very carefully. Thanks

Gavin

Subject: I am in to fix Fig.A, A2 data
From: Makiko Sato <makis@giss.nasa.gov>
Date: Sun, 12 Aug 2007 15:02:41 -0400
To: James Hansen <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

Jim, Reto,

I just came in to update the station based and land-ocean temperatures so that my tables Fig.A and Fig.A2 will have exactly the same numbers as Reto/Ken's tables. First I will make a directory called alp:/gcm/maki/Tsurface/store and save all global mean and US mean linegraph data I still have somewhere in my workstation, so that in case something like this happens we can look back old data. Since it doesn't take much space, I will save these data sets every month from now on.

If you have some suggestions/questions, please let me know.

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Subject: Re: Fig A2
From: Makiko Sato <makis@giss.nasa.gov>
Date: Sun, 12 Aug 2007 17:37:58 -0400
To: rruedy@giss.nasa.gov, gs210@columbia.edu
CC: jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov

> I also think it would pay to take a look at the "graphs" section, drop or add some displays, and add to each display a small text indicating what we can (or cannot) learn from it, why one would be interested in it. Right now, it looks to me more like a random selection of graphs with a few maps thrown in for good measure.
>
> Reto

Reto,

When I took over from Jay when he left (Jay displayed what Jim told him to, based on our 1999 temperature paper), the graph section had only five graphs.

Fig. A, global mean, annual mean using meteorological stations (Fig. 4 of the paper)
Fig. B, northern, low, southern latitude annual means (Fig. 5 of the paper)
Fig. C, global mean, monthly means (Fig. 8 of the paper)
Fig. D, U.S. mean, annual means (Fig. 6 of the paper)
Fig. E, global and low latitude means, seasonal means (Fig. 7 of the paper)

I added

Fig. A2 (land-ocean index) because Jim switched more to land-ocean than the station data, and now this is our standard, and I don't think we should remove this.
hemispheric means, I put it because somebody I forgot (outsider) requested, and I thought it may not be a bad idea, but if you don't like this, I can remove.
set of recent months maps because Jim is quite interested in these, but since I have my own temperature page, I can remove this, if you want to.

And then the top one with a linegraph and three maps. As I mentioned earlier, some people like this, including Jim. But if you hate this, I can remove it also.

Makiko

Subject: Re: Fig A2
From: Makiko Sato <makis@giss.nasa.gov>
Date: Sun, 12 Aug 2007 18:53:42 -0400
To: rruedy@giss.nasa.gov, gs210@columbia.edu
CC: jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov

OK, I updated all versions of Fig.A and Fig.A2 with newest data with 3 digits after decimal, and manually typed in the table numbers to match Reto's tables. Since I did manually, there may be some mistakes. If you find some, please let me know.

Makiko

> On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:
> > Reto, there are small (0.01) difference between the current
> > Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt.
> > Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these
> > be reconciled to prevent any further confusion. I know it's small,
> > but people are now looking very carefully. Thanks
> >
> > Gavin
> >
> >

Subject: Re: Fig A2
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 13 Aug 2007 17:32:31 -0400
To: rruedy@giss.nasa.gov

Reto,

It would be good if you give me 4 digits. Thank you.

Makiko

At 17:29 2007/08/13, you wrote:
> Makiko,
>
> As you pointed out to me, if I keep 4 decimal places rather than 3,
> rounding to 2 digits will no longer be different than rounding directly
> to 2 digits (and I still have the 3rd digit if needed). So I will use 4
> digits for internal purposes in the future.
>
> Reto
>
> On Sun, 2007-08-12 at 18:53 -0400, Makiko Sato wrote:
> > OK, I updated all versions of Fig.A and Fig.A2 with newest data with
> > 3 digits after decimal, and manually typed in the table numbers to
> > match Reto's tables. Since I did manually, there may be some
> > mistakes. If you find some, please let me know.
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> > Makiko
> >
> >
> >
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> > > >
> > > > Gavin
> > > >
> > > >

Subject: Re: Temperature change analysis
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 09:11:48 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>

On 8/13/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> Hi Reto,
>
> Sorry that I didn't communicate clearly what I wanted to see in the new run of the analysis program. Two hings need to be different from what Makiko showed me.

Reto,

He means the graphs you made and put in his mail box. When he got back from DC, I wanted to make sure he would take a look at them, so I picked them up from the mail box and handded him.

I am really sorry if I had misunderstood what you said. Actually I didn't see the graphs you made. Your newest computations for checking purpose had two changes at once, (a) all GHCN (no USHCN) and (b) all hundred some stations except St. Helena and Hawaii previously removed artificially are back, right?

Makiko

> I know that the USHCN/GHCN business must be frustrating!, but...
>
> First we cannot drop the NCDC improvements to the USHCN. There is no way that we can compete with the person-years of effort that they (Tom Karl and all the others at NCDC) put into that, and they are the experts. Also we have published it and we should continue to follow what we have in that (2001) paper. The correction that you made to stations post 2000 records (by setting the means for 1990 to be equal in the two records?) should be fine, and since we have made that available, we should use that. We don't want still another result, which would really set the pundits happy.
>
> Second, what I want to see is how our new result compares with what we get if we make none of the changes in the table of changes, i.e., do not pick and choose any corrections (such as St. Helena) as being "obviously correct".
>
> Jim

Subject: Re: FW: <no subject>
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 09:20:36 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Jim,

This is too long, so I will read it later in my office.

Makiko

On 8/14/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> Don,
>
> These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.
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> In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2001 and later, and only the United States.
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> The flaw, even when present (in 2001-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.
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> Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S. (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.
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> *The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and

it has been so corrected.

On 8/13/07, Donald Anderson <donald.anderson-1@nasa.gov > wrote:

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov >
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.

Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.

The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to

prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Subject: 1880-1920 and 1997-2006 means
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 13:07:01 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov

Jim,

Sorry, I have forgotten about the mean temperatures you told me when I was in my car this morning.

1880-1920 means
U.S. -0.2011 => -0.2054 (Before => is old analysis, after => is new analysis)
globe -0.2633 => -0.2618
These should not have changed, but they did because as I mentioned to you a few days ago, I don't have exactly the same data with and without recent corrections. The old data are what I made in January or March this year, so although they are annual means through 2006, they are slightly different by addition of some stations, etc.

1997-2006 means
U.S. 0.7751 => 0.6754
globe 0.4882 => 0.4844
Again in here, some portions of the change may be because I am NOT using exactly the same data with/without recent corrections.

Makiko

Subject: Re: Fwd: Fwd: FW: <no subject>
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 13:13:25 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

<x-flowed>
Jim,

In the e-mail below, we find "If you go to NASA's Web site and look at the " U.S. surface air
> temperature" rankings for the Lower 48 states, you might notice something
> has changed."

Where did we put the US ranking? Does this person made a ranking table from my old and new US mean tables?

Makiko

At 13:01 2007/08/14, you wrote:

---------- Forwarded message ----------
From: James Hansen <<mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov>
Date: Aug 14, 2007 1:00 PM
Subject: Re: Fwd: FW: <no subject>
To: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:"
<<mailto:dmclean8@bloomberg.net>dmclean8@bloomberg.net>

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see in our 2001 paper we found 1934 slightly warmer, by an insignificant hair over, 1998. We still find that result. The flaw affected temperatures only after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication, and other researchers have taken that description, applied it to the raw data and come up with the same results that we get.

Jim

On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM: <<mailto:dmclean8@bloomberg.net> dmclean8@bloomberg.net> wrote:
james, pardon me: i see the records volz was referring to are ***global***. the u.s. figures showed 1998 as the warmest year. nevertheless, nasa has indeed newly ranked 1934 as the warmest year. also, i'd be grateful if you could respond to the second question, regarding your algorithm and making it public.

best,
demian
----- Original Message -----
From: James Hansen <<mailto:jhansen@giss.nasa.gov> jhansen@giss.nasa.gov>
At: 8/14 12:15:10

Demian, I am running to a meeting and may not get back in time for your deadline -- following may help answer your question -- presumably you saw my "Upstairs" note? Jim Hansen

---------- Forwarded message ----------
From: James Hansen <<mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov>

Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <<mailto:donald.anderson-1@nasa.gov>donald.anderson-1@nasa.gov>, Jack Kaye <
<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>
Cc: Leslie McCarthy <<mailto:lnolan@giss.nasa.gov> lnolan@giss.nasa.gov>

Don,

These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

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On 8/13/07, Donald Anderson <<mailto:donald.anderson-1@nasa.gov> donald.anderson-1@nasa.gov > wrote:
>
> Jim:
> FYI
> Any comment?
> Don
>
> _____
> Don Anderson
> 3G84

> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: <mailto:Donald.Anderson-1@nasa.gov>Donald.Anderson-1@nasa.gov
>
>
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> *Date: *Mon, 13 Aug 2007 12:01:06 -0400
> *To: *"Anderson, Donald (HQ-DK000)" < <mailto:donald.anderson-1@nasa.gov>donald.anderson-1@nasa.gov >,
> "Maring, Hal (HQ-DK000)" < <mailto:hal.maring@nasa.gov>hal.maring@nasa.gov >
> *Cc: *"Kaye, Jack A. (HQ-DK000)" < <mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>, "Brown, Dwayne C.
> (HQ-NB060)" < <mailto:dwayne.c.brown@nasa.gov>dwayne.c.brown@nasa.gov>
> *Conversation: *<no subject>
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>
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>
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> *
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> day. If you go to NASA's Web site and look at the " U.S. surface air
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> *
>
>
> And he goes on and on....
>
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> website
> <http://www.nasa.gov/centers/goddard/news/topstory
/2006/2006_warm.html,dated>http://www.nasa.gov/centers/goddard/news/topstory
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Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998,
> 2002, 2003, and 2006.
>
> Stephen Volz, Ph.D.
> Program Executive, Science Mission Directorate
> Suite 3B74
> NASA Headquarters
>
> "Try not. Do, or do not. There is no try."
> - Yoda, Jedi Master
>
>
> ------ End of Forwarded Message
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Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <<mailto:donald.anderson-1@nasa.gov> donald.anderson-1@nasa.gov >, Jack Kaye <<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>
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Modeling, Analysis and Prediction (MAP)
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Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <<mailto:donald.anderson-1@nasa.gov> donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <<mailto:hal.maring@nasa.gov> hal.maring@nasa.gov >
Cc: "Kaye, Jack A. (HQ-DK000)" <<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < <mailto:dwayne.c.brown@nasa.gov>dwayne.c.brown@nasa.gov>
Conversation: <no subject>
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Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website <http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html,>http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

</x-flowed>

Subject: Re: Fwd: FW: <no subject>
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 14:09:34 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

I am sure I had 1998 warmer than 1934 at least once because on my own temperature web page (which most people never look at), I have

US annual

(Last Modified: 2007-01-12)

and since it was made in January when I updated all the graphs, I had my US mean table which is consistent with this until last Monday.

I didn't keep all the data, but some of them are

	1934	1998	
1999 July	1.459	0.918	
2000 Nov.	1.273	1.151	
2001 Jan.	1.235	1.199	<= These changes in early years may be due to different analysis
2006 Jan.	1.235	0.930	<= This is questionable, I may have kept some data which I was checking.
2007 Jan.	1.227	1.242	<= This is only time we had 1998 warmer than 1934, but one web for 7 months.
2007 Mar.	1.247	1.234	<= Somehow I recomputed in March, but didn't make changes to the web page.
2007 Aug.	1.249	1.226	<= Most recent with corrections, and with July data

I am sorry, I should have kept more data, but I was not interested in US data after 2001 paper.

Makiko

At 13:27 2007/08/14, James Hansen wrote:

> Makiko, Reto, could you please clear this up. Other people keep saying the same thing that Demian does, i.e., that we previously claimed that 1998 was warmer than 1934. Is that right? I am quite sure that our 2001 paper shows 1934 slightly warmer, as we still find. Of course, scientifically this is all nonsense, as the difference of 0.02 is much less than the accuracy, so practically it should be stated as a tie. I know that whenever new stations are added to the record it can change things by small amounts. Did we once find 1998 as warmer??? Jim (I will be away from e-mail for a few hours).
>
> On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:
> <<mailto:dmclean8@bloomberg.net>dmclean8@bloomberg.net> wrote:
> Thanks, James. I'm not familiar with that paper from 2001. Is it not true, though, that NASA's rankings, as available at:
>
> <http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt>http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
>
> now show 1934 as the hottest year, where 1998 used to hold that position?
>
> thanks,
> demian
> ----- Original Message -----

From: James Hansen <<mailto:jhansen@giss.nasa.gov> jhansen@giss.nasa.gov>
At: 8/14 13:00:38

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see in our 2001 paper we found 1934 slightly warmer, by an insignificant hair over, 1998. We still find that result. The flaw affected temperatures only after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication, and other researchers have taken that description, applied it to the raw data and come up with the same results that we get.

Jim

On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM: <<mailto:dmclean8@bloomberg.net> dmclean8@bloomberg.net>
wrote:
> james, pardon me: i see the records volz was referring to are **global**.
> the u.s.
> figures showed 1998 as the warmest year. nevertheless, nasa has indeed
> newly
> ranked 1934 as the warmest year. also, i'd be grateful if you could
> respond to
> the second question, regarding your algorithm and making it public.
>
> best,
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> Date: Aug 14, 2007 2:52 AM
> Subject: Re: FW: <no subject>
> To: Donald Anderson <<mailto:donald.anderson-1@nasa.gov>donald.anderson-
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> <mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>
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> > 3G84
> > Modeling, Analysis and Prediction (MAP)
> > Earth Science Division
> > Science Mission Directorate
> > NASA HQ
> > Washington, DC, 20546-0001
> > 202-358-1432 Fax: x2770
> > email: <mailto:Donald.Anderson-1@nasa.gov>Donald.Anderson-1@nasa.gov
> >
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> > *Date: *Mon, 13 Aug 2007 12:01:06 -0400
> > *To: *"Anderson, Donald (HQ-DK000)" < <mailto:donald.anderson-

1@nasa.gov>donald.anderson-1@nasa.gov>,
> > "Maring, Hal (HQ-DK000)" < <mailto:hal.maring@nasa.gov>hal.maring@nasa.gov >
> > *Cc: *"Kaye, Jack A. (HQ-DK000)" <
<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>, "Brown, Dwayne
> C.
> > (HQ-NB060)" < <mailto:dwayne.c.brown@nasa.gov>dwayne.c.brown@nasa.gov>
> > *Conversation: *<no subject>
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> "Maring, Hal (HQ-DK000)" < <mailto:hal.maring@nasa.gov>hal.maring@nasa.gov >
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> (HQ-NB060)" < <mailto:dwayne.c.brown@nasa.gov>dwayne.c.brown@nasa.gov>
> *Conversation: *<no subject>
> *Subject: *<no subject>
>
> Don et al.,
>
> I saw this on the NASA news summary today.
>
> *
> Columnist Notes Changes In NASA's Temperature Data. **In an op-ed for
> the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is
> also senior contributing editor for Hollinger Inc. Publications, senior
> North American columnist for Britain's Telegraph Group, North American
> editor for the Spectator, writes, " Something rather odd happened the other
> day. If you go to NASA's Web site and look at the " U.S. surface air
> temperature" rankings for the Lower 48 states, you might notice something
> has changed.
>
> Then again, you might not. They're not issuing any press releases about
> it. But they have quietly revised their All-Time Hit Parade for U.S.
> temperatures.
>
> The "hottest year on record" is no longer 1998, but 1934. Another alleged
> swelterer, the year 2001, has now dropped out of the Top 10 altogether, and
> most of the rest of the 21st century - 2000, 2002, 2003, 2004 - plummeted
> even lower down the Hot 100. In fact, every supposedly hot year from the
> '90s and Oughts has had its temperature rating reduced. Four of America's
> Top 10 hottest years turn out to be from the 1930s, that notorious decade
> when we all drove around in huge SUVs with the air-conditioning on
> full-blast. If climate change is, as Al Gore says, the most important issue
> anyone's ever faced in the history of anything ever, then Franklin Roosevelt
> didn't have a word to say about it. And yet we survived.
>
> So why is 1998 no longer America's record-breaker? Because a very diligent
> fellow called Steve McIntyre of <http://climateaudit.com/>climateaudit.com
labored long and hard to
> prove there was a bug in NASA's handling of the raw data. He then notified
> the scientists responsible, and received an acknowledgment that the mistake
> was an "oversight" that would be corrected in the next "data refresh." The
> reply was almost as cool as the revised chart listings.
>
> Who is this man who understands American climate data so much better than
> the National Aeronautics and Space Administration? Well, he's not even
> America: He's Canadian. Just another immigrant doing the jobs Americans
> won't do, even when they're federal public servants with unlimited budgets?
> No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he
> found the error, and NASA has now corrected its findings - albeit without
> the fanfare that accompanied the hottest-year-on-record hysteria of almost a
> decade ago. Sunlight may be the best disinfectant, but, when it comes to
> global warming, the experts prefer to stick the thermometer where the sun
> don't shine."
> *
>
>
> And he goes on and on....
>
> Does anyone know what this guy is talking about? I checked the NASA
> website
> <http://www.nasa.gov/centers/goddard/news/topstory
/2006/2006_warm.html,dated>http://www.nasa.gov/centers/goddard/news/topstory

/2006/2006_warm.html,dated
Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998,
> 2002, 2003, and 2006.
>
> Stephen Volz, Ph.D.
> Program Executive, Science Mission Directorate
> Suite 3B74
> NASA Headquarters
>
> "Try not. Do, or do not. There is no try."
> - Yoda, Jedi Master
>
>
> ------ End of Forwarded Message
>

Demian, I am running to a meeting and may not get back in time for your deadline -- following may help answer your question -- presumably you saw my "Upstairs" note? Jim Hansen

---------- Forwarded message ----------
From: James Hansen <<mailto:jhansen@giss.nasa.gov> jhansen@giss.nasa.gov >
Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <<mailto:donald.anderson-1@nasa.gov> donald.anderson-1@nasa.gov >, Jack Kaye <<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>
Cc: Leslie McCarthy <<mailto:lnolan@giss.nasa.gov> lnolan@giss.nasa.gov>

Don,

These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2000 and later, and only the United States.

The flaw, even when present (in 2000-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.

Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S. (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.

Jim

*The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on

metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected, and it has been corrected.

On 8/13/07, Donald Anderson <<mailto:donald.anderson-1@nasa.gov>donald.anderson-1@nasa.gov > wrote:
Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: <mailto:Donald.Anderson-1@nasa.gov>Donald.Anderson-1@nasa.gov

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" <<mailto:svolz@nasa.gov> svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <<mailto:donald.anderson-1@nasa.gov> donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <<mailto:hal.maring@nasa.gov> hal.maring@nasa.gov >
Cc: "Kaye, Jack A. (HQ-DK000)" <<mailto:jack.a.kaye@nasa.gov>jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < <mailto:dwayne.c.brown@nasa.gov>dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

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Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.

The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century – 2000, 2002, 2003, 2004 – plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of <http://climateaudit.com/>climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

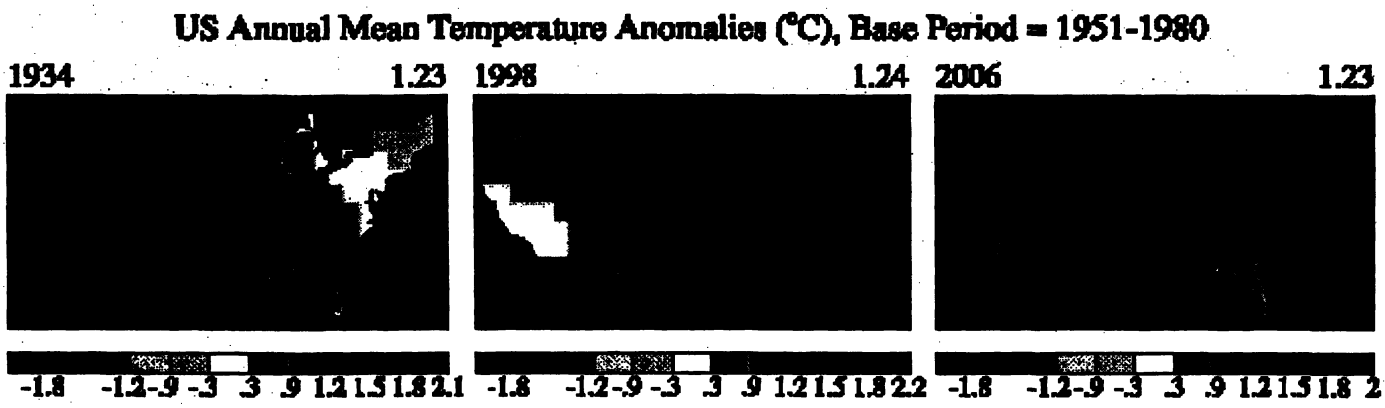
Does anyone know what this guy is talking about? I checked the NASA website <http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html,>http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

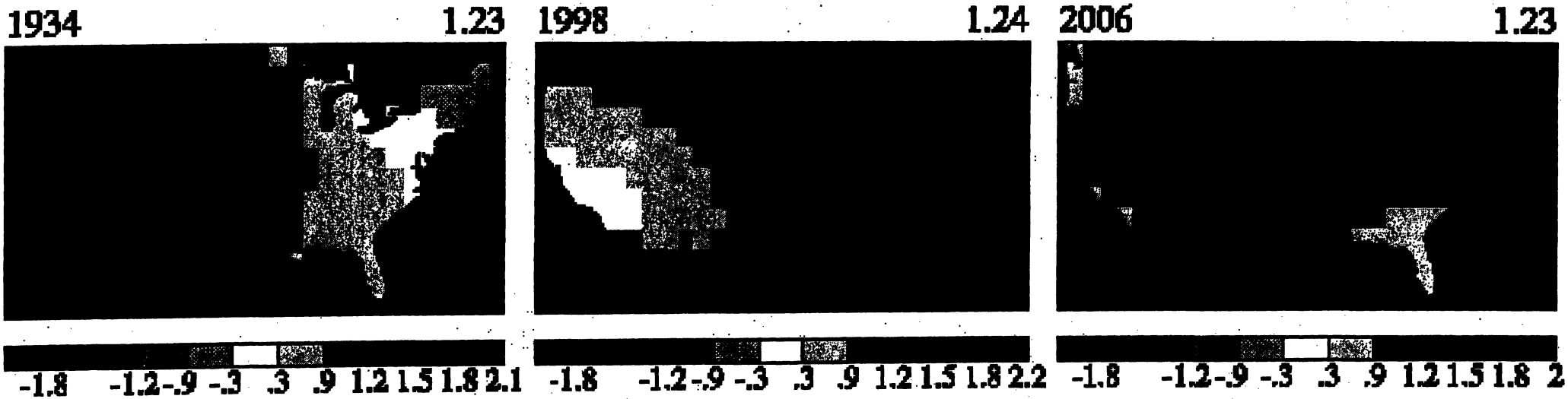
------ End of Forwarded Message

a00fb5.jpg



a00fb5.jpg	**Content-Type:** image/jpeg **Content-Encoding:** base64

US Annual Mean Temperature Anomalies (°C), Base Period = 1951-1980



Subject: one sentence on the web graphs page
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 14 Aug 2007 17:01:25 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov

Jim,

Since I didn't hear from you today, I added

Please see <http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf">"A Light On Upstairs?" for discussions regarding the changes made on August 7, 2007 for 2000-2006 annual mean, U.S. mean temperatures.

at the top of http://data.giss.nasa.gov/gistemp/graphs/. If you want to make changes, please let me know.

Makiko

Subject: Re: 1997-2006 vs. 1880-1920 maps
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 11:19:33 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

I can't find the article in Wshington Post which you just mentioned in this e-mail.

Makiko

On 8/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> I intend to finish writing a discussion today. Assuming that I succeed at that, if we can't make maps for the uncorrected data, we will get along without that. The Washington Post did a good job with their story -- good thing that I took their call. The Washington Times is a political rag. Jim
>
> On 8/15/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> > OK. As long as I can get wrong and corrected data in the same format from Reto, I can make these maps easily. As I showed on ~makis/GISSTemp, the corrected ones I get from Reto's web page and the ones I made map data using his old data look very different, and we cannot show them together.
> >
> > First I thought any data are OK, but I am sure many will compare maps with our web site. So I know it is a lot of work for Reto as usual, but since it is getting more and more a sirious problem (not scientifically at all but politically), I will ask him to put old data on a temporary web site so that I can get the map data using the old data from a web site in exactly the same manner as the new ones.
> >
> > How soon do you need? I cannot come in Friday.
> >
> > Makiko
> >
> > On 8/15/07, James Hansen <jhansen@giss.nasa.gov > wrote:
> > > I am now writing a new clear discussion of the whole matter (now that Congress and NASA management are involved). I would like the first figure
> > > to be the two figures that you made before (line graph of global T and line
> > > graph of U.S. T, showing the original and corrected results). These should
> > > be side by side, and thus smaller than before.
> > >
> > > The other figure should be maps. I am only interested in land+ocean. By
> > > the way I cannot understand your 1934 vs 1998 maps. As you seem to be able
> > > to show three maps across very well, we might consider including 1934 and
> > > 1998 maps (land plus ocean in both cases). Here is the maps that I think we
> > > would like:
> > > Column 1 "1997-2006 relative to 1880-1920"

> Column 2 "1997-2006 relative to 1951-1980"
> Column 3 "1934 versus 1998"
> Heading for 1st and 2nd maps in top row: Flawed Data
> Heading for 3rd map in top row: 1934 relative to 1951-1980
> Heading for 1st and 2nd maps in 2nd row: Corrected Data
> Heading for 3rd map in 2nd row: 1998 relative to 1951-1980
>
> On second thought, maybe it is better to make the 4 maps that go together as
> a two-by-two figure, and then make a third figure with four parts 1934, 1998, and the two warmest U.S. years in 2000-2006.
>
> On 8/14/07, Makiko Sato < makis@giss.nasa.gov> wrote:
> Intried nmy best, but as I explained to you in the msg on your cell, I can't make exactly the same maps woth/wo corrections.
>
> Makiko
>
> On 8/14/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> No, no rush - Jim
>
> On 8/14/07, Makiko Sato < makis@giss.nasa.gov> wrote:
> Sorry for late reply. Reto was here and told me he was working for
> what you told him this morning, but then the disk got full, he had to
> ask Ken Bell to scratch some old stuff, etc.
>
> I made maps from what I can get from the current GISS web page, so it
> means the most recent corrected data. I can't make these with wrong
> data so easily, but I am sure I have original data from earlier this
> year, so if I use them and write some computer program, I should be
> able to do it. Do you need them today?
>
> Makiko
>
> At 18:41 2007/08/14, you wrote:
> this is great -- I have a very fast internet connection -- these are
> the numbers with the corrected 2000-2007? Can you also make the maps for the wrong data, so that we can show even with the error it
> does not make a huge qualitative difference?

On 8/14/07, Makiko Sato <<mailto:makis@giss.nasa.gov> makis@giss.nasa.gov> wrote:
Jim,

I put the maps at the top of
<
http://www.giss.nasa.gov/~makis/GISS_Temp/
http://www.giss.nasa.gov/~makis/GISS_Temp/

.

Makiko

Subject: global maps of 1998-2006 annual mean temperatures
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 12:45:52 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

Jim,

As we talked on the phone, I made global maps of 1998-2006 annual mean temperatures, with the US and global mean ranking among these years printed at the titles. (The 3rd set of maps from the top on http://www.giss.nasa.gov/~makis/GISS_Temp/) I don't know if it is a good idea to show only the US warmest in recent years because they may say we just picked up the years we like.

About the uncorrected data, Reto is going to make a utility to compute temperature anomalies exactly in the way he does on the web pages, and switch the data from newest to some old ones, so that I can make exactly in the same way for both corrected and uncorrected (and the same as the web). He said cut and paste US onto the global map is dangerous because US means are extended with 1200 km radius to Canada and Mexico. He thinks he can do it within a few hours.

Reto is also going to write you that unadjusting those hundred some stations didn't make almost any difference in the US mean and made very little difference in the global means.

Makiko

Subject: Re: Usufruct and the Gorilla
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 14:09:42 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Jim,

I read this. Since I I can't talk about the title or the tone you write, so I can tell only minor things.

(1) 1st sentence, you wrote "global temperature map", but do you want to say only about the map? Tables and a monthly graph are updated every month.

(2) in the second paragraph, you wrote "only after 2000". Strictly speaking, isn't it "only in 2000 and afterwards"?

(3) "XX July 2007" should be "August 7, 2007", I think. Isn't it, Reto?

Makiko

At 13:44 2007/08/15, James Hansen wrote:

> Maybe you should read the first part of this story to make sure there are no errors.
>
> Robert, if you get this e-mail: would you be available later today to put this story (to be in an e-mail) on the Columbia web site? Or can you give directions for someone else to do that?
>
> Jim
>
> The Real Deal: Usufruct & the Gorilla
>
> Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces a global temperature map at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?
>
> The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States (by just over a tenth of a degree) and only after 2000. We made the adjustment to the program, thanked the fellow who pointed it out, and thought that was the end of it.
>
> [The correction: As explained in the e-mail sent last week, one improvement made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this

introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they are seeking to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a much more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that crucial matter, I need to make clear how the deceit of the little fish works, to expose their sham.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead choose to discuss the ranking of temperature in different years. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the Untied States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking is commonly different than that obtained in the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups.

Subject: Re: Temp Page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 15 Sep 2007 14:53:07 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert Schmunk" <rschmunk@giss.nasa.gov>

Reto,

It means that Robert will put them on the GISS temperature front page
and you will check if that is the way Jim wants?

Makiko

On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> With suggested editing below, I believe that this should allow a complete
> version of the new front page to GISTEMP. I think that you should go ahead
> and replace it without waiting for me to get back from Denmark. Jim
>
> On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > In the description of step2 (homogeneization) "urban" should be replaced
> > by "urban and peri-urban" or "non-rural" or we may add a sentence to
> > indicate that "small-town" stations are adjusted the same way as urban
> > stations. Although it is mentioned at the end of the previous section,
> > it should probably be repeated here to avoid accusations of
> > inconsistency.
>
> let's use: "urban and peri-urban (i.e., other than rural)"
> that makes an unambiguous definition of our categories
> > April 2006 modification:
> > Looking at maps based on ocean data alone, we noticed that the HadISST
> > data (1880-1981) extended to regions containing sea ice, whereas the
> > NOAA data (1982-present) did not. In order to get a more consistent time
> > series, the HadISST part was restricted to the same ice-free regions as
> > the NOAA data. Since the temperature of water containing ice is always
> > near the freezing point, including data from such regions tends to
> > artificially dampen any heating or cooling trend.
> April 2006 modification: HadISST ocean temperatures are now used only for
> regions that are identified as ice-free in both the NOAA and HadISST
> records. This change effects a small number of gridboxes in which HadISST
> has sea ice while NOAA has open water. The prior approach damped
> temperature change at these gridboxes because of specification of a fixed
> temperature in sea ice regions. The new approach still yields a
> conservative estimate of surface air temperature change, as surface air
> temperature usually changes markedly when sea ice is replaced by open water
> or vice versa. Because of the small area of these gridboxes the effect on
> global temperature change was negligible.
> > Reto
> >
> > On Fri, 2007-09-14 at 19:49 -0400, James Hansen wrote:
> > > Here is new text for the Web. Some inserts and corrections are
> > > needed. The change made in April 2006 in unintelligible. As
> indicated,
> > > it needs to include links to several graphs/maps made by Makiko. Some
> > > parts of this, such as the Background probably need to be via link --
> but
> > > perhaps these sections should start out with the first few lines and

then

.... to a link for the whole section?? All of the items in the list of changes to the analysis should be included, but perhaps just the first line

or so then... to a link??

Jim

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fig A2
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:09:17 -0400
To: gs210@columbia.edu, rruedy@giss.nasa.gov

Yes, I knew about it. I thought 7 months out of 12 for the annual mean is dangerous, but 55 months out of 60 is quite safe, but since people may pick up any small things these days, I will remove it after I make all figures for Jim's write up -- before I home.

Makiko

At 15:00 2007/08/15, gs210@columbia.edu wrote:

> One final quibble. In Fig A2, we now have the 5 year mean value for 2005 - which implies that 2007 data is being used in the calculation. But since 2007 isn't complete, that number will change by the end of the year. It might be cleaner not to calculate the that last value since it uses information that isn't seen (yet) in the annual average numbers.
>
> Gavin
>
> Quoting Reto Ruedy <rruedy@giss.nasa.gov>:
>
> > Makiko,
> >
> > As you pointed out to me, if I keep 4 decimal places rather than 3,
> > rounding to 2 digits will no longer be different than rounding directly
> > to 2 digits (and I still have the 3rd digit if needed). So I will use 4
> > digits for internal purposes in the future.
> >
> > Reto
> >
> > On Sun, 2007-08-12 at 18:53 -0400, Makiko Sato wrote:
> > > OK, I updated all versions of Fig.A and Fig.A2 with newest data with
> > > 3 digits after decimal, and manually typed in the table numbers to
> > > match Reto's tables. Since I did manually, there may be some
> > > mistakes. If you find some, please let me know.
> > >
> > > Makiko
> > >
> > >
> > >
> > > >On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:
> > > > > Reto, there are small (0.01) difference between the current
> > > > > Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt.
> > > > > Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these
> > > > > be reconciled to prevent any further confusion. I know it's small,
> > > > > but people are now looking very carefully. Thanks
> > > > >
> > > > > Gavin
> > > > >
> > > > >

Subject: Fwd: Re: Usufruct and the Gorilla
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 18:06:36 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, makis@giss.nasa.gov

The font for Fig. 1 and Fig 2&3 are not matched. What should I do?

Makiko

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces a global temperature map at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States (by just over a tenth of a degree) and only after 2000. We made the adjustment to the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, one improvement made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

Emacs!

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole

hill. I believe that these people are not stupid, instead they are seeking to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a much more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that crucial matter, I need to make clear how the deceit of the little fish works, to expose their sham.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead choose to discuss the ranking of temperature in different years. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

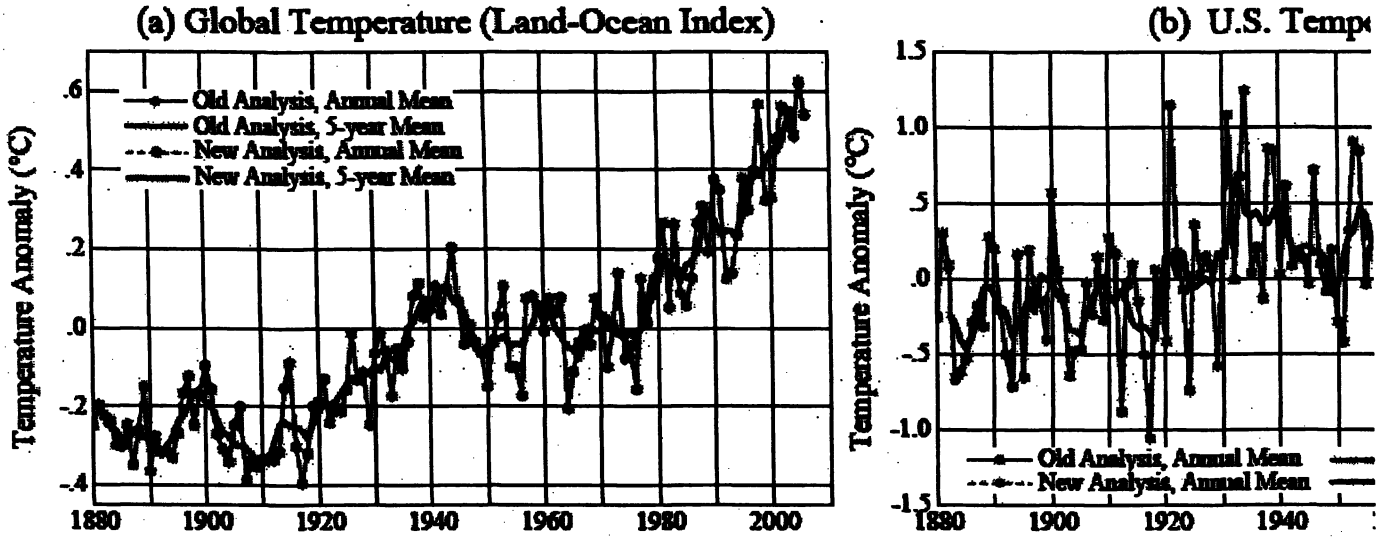
But what if you are a chauvinist and only care about temperature in the Untied States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking is commonly different than that obtained in the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups.

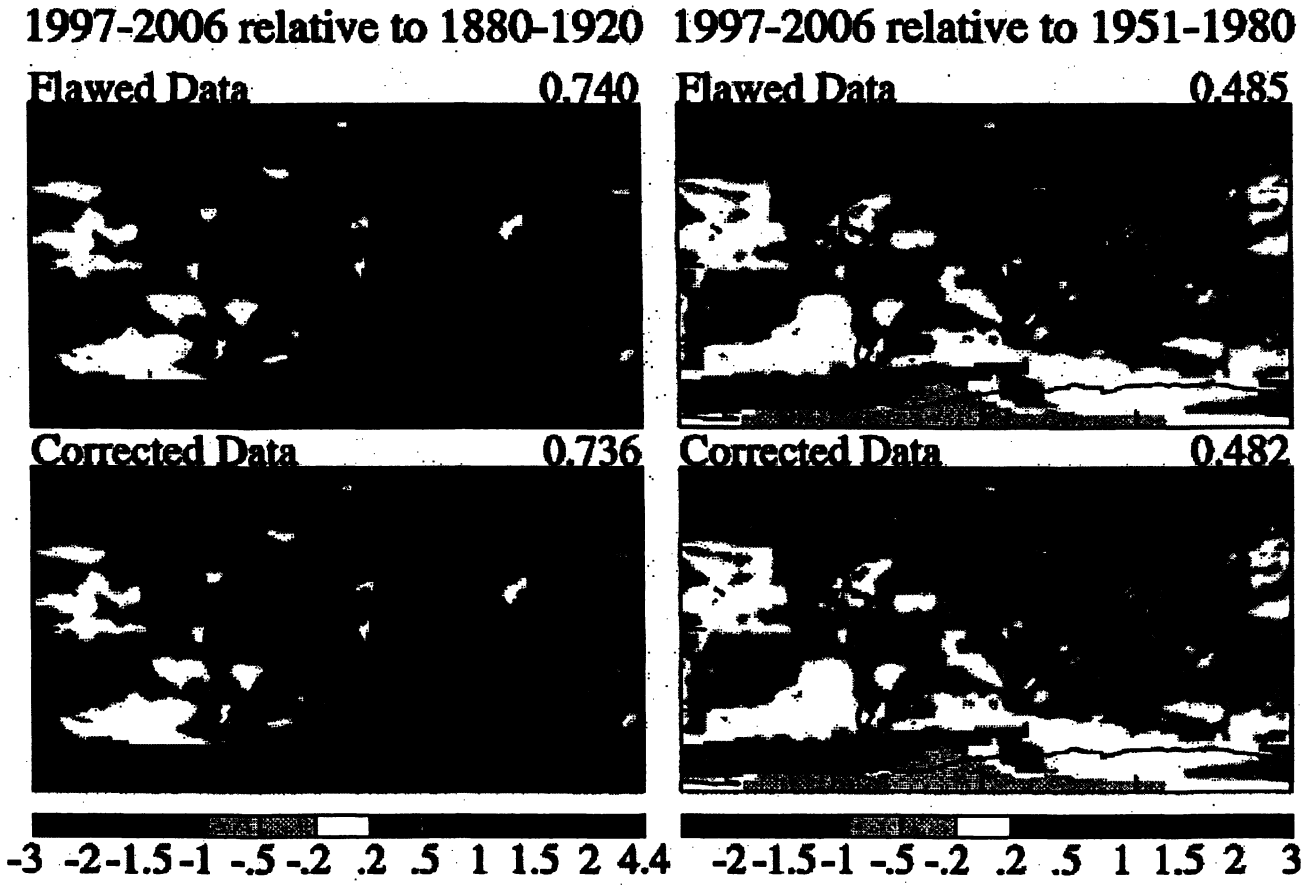
Emacs!

Emacs!

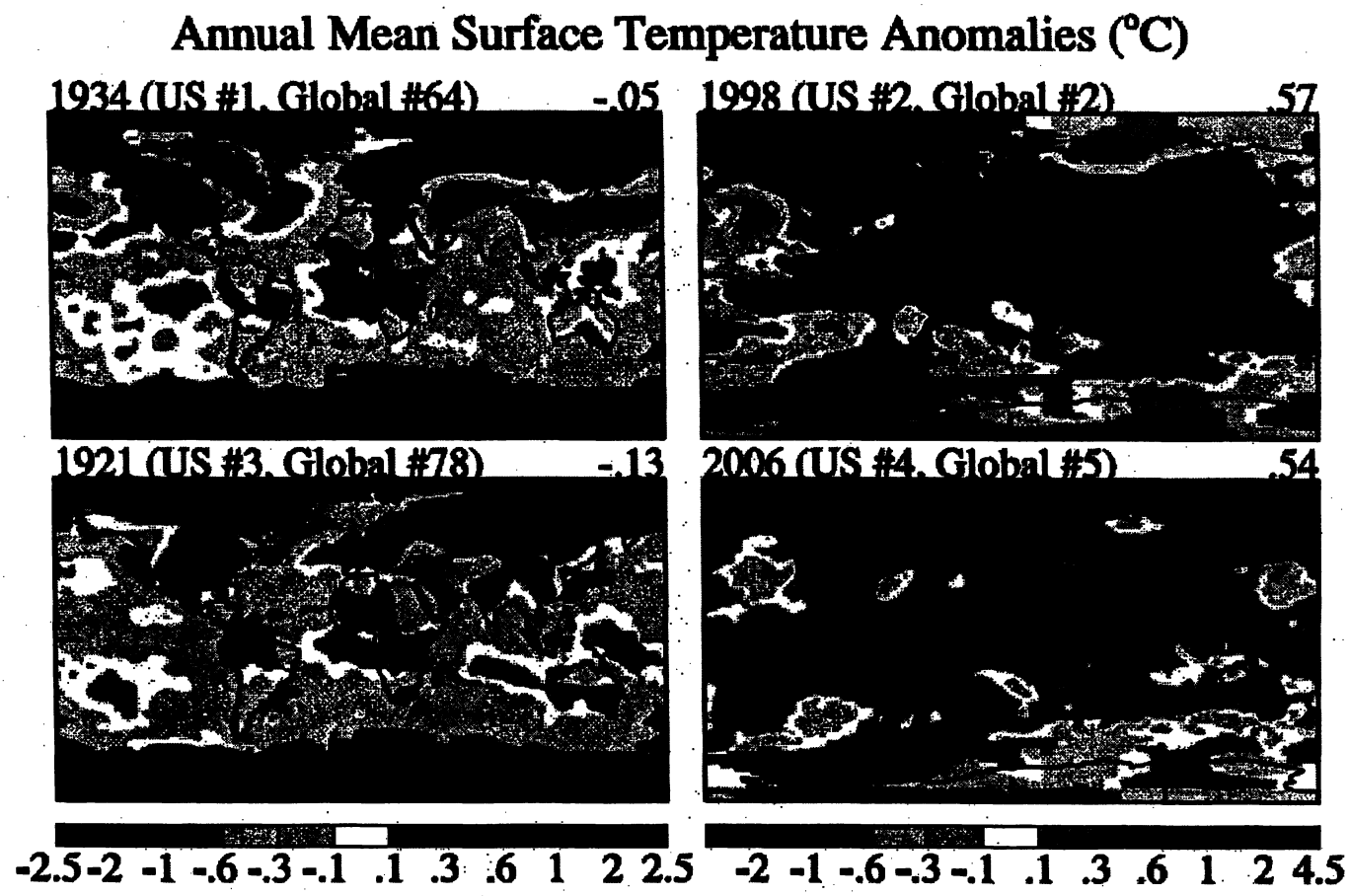
—18a5d75.jpg———————————————————————————————————



18a5d85.jpg



18a5db3.jpg



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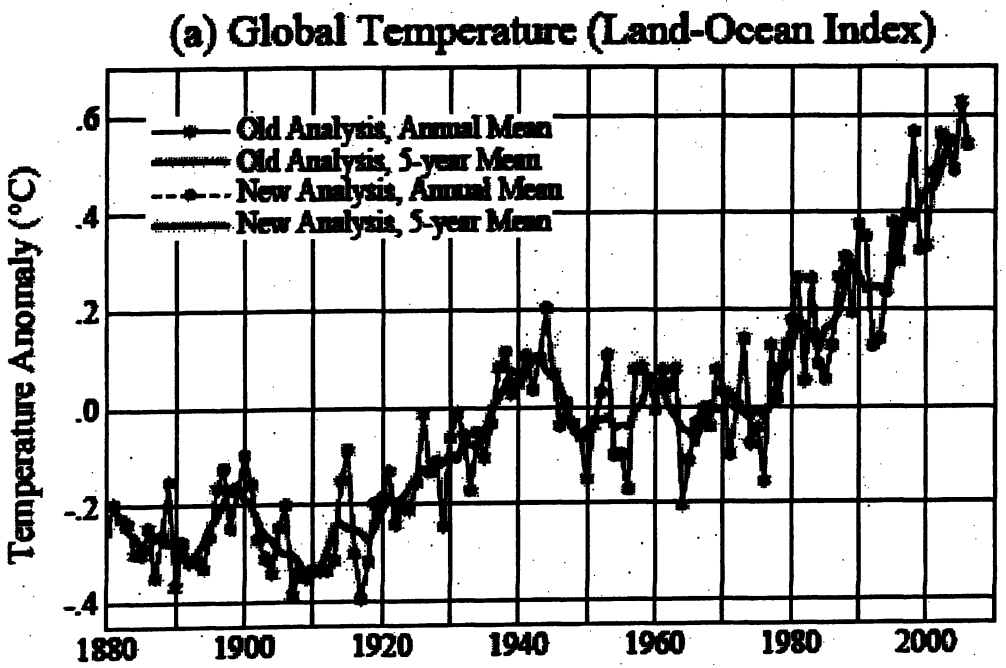
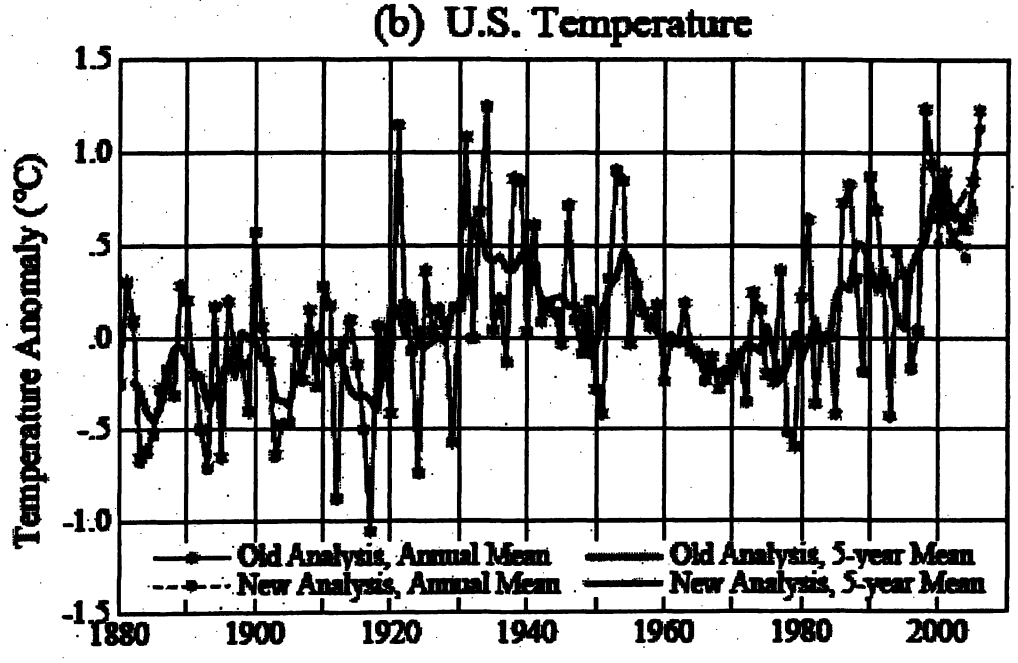
18a5db3.jpg

18a5db3.jpg	Content-Type: image/jpeg Content-Encoding: base64


(a) Global Temperature (Land-Ocean Index)
Temperature Anomaly (°C)
.6
.4
.2
.0
-.2
-.4
1880
1900
1920
1940
1960
1980
2000
Old Analysis, Annual Mean
Old Analysis, 5-year Mean
New Analysis, Annual Mean
New Analysis, 5-year Mean


(b) U.S. Temperature
Temperature Anomaly (°C)
1.5
1.0
.5
.0
-.5
-1.0
-1.5
1880
1900
1920
1940
1960
1980
2000
Old Analysis, Annual Mean
Old Analysis, 5-year Mean
New Analysis, Annual Mean
New Analysis, 5-year Mean

1997-2006 relative to 1880-1920

Flawed Data 0.740

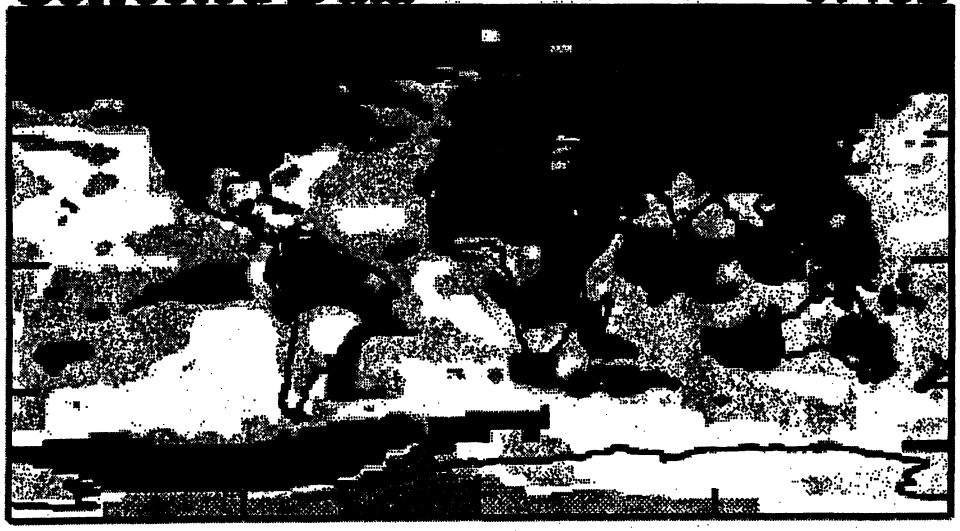
Corrected Data 0.736

-3 -2 -1.5 -1 -.5 -.2 .2 .5 1 1.5 2 4.4

1997-2006 relative to 1951-1980

Flawed Data 0.485

Corrected Data 0.482



-2 -1.5 -1 -.5 -.2 .2 .5 1 1.5 2 3

Annual Mean Surface Temperature Anomalies (°C)

1934 (US #1, Global #64) -.05

1998 (US #2, Global #2) .57

1921 (US #3, Global #78) -.13

2006 (US #4, Global #5) .54

-2.5 -2 -1 -.6 -.3 -.1 .1 .3 .6 1 2 2.5

-2 -1 -.6 -.3 -.1 .1 .3 .6 1 2 4.5

Base Period 1951-1980

Subject: Re: Re: Real Deal
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 21:35:03 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

Jim,

There are some more.

(1) The biggest error I made was that I didn't notice that you had exchanged Fig. 2 and 3.

Others are minor.
(2) Do you want to give the url
http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
after "the e-mail sent last week" in the 3rd paragraph?

(3) Do you really mean "micrometer" not magnifying glass? I thought a micrometer measures thickness of a paper or something, but I am not sure.

(4) "relative hot" or "relatively hot"?

(5) ")" miising after "Dangerous" at the end of a paragraph.

Send me more before you . I may be able to read it because I

Makiko

On 8/15/07, Makiko Sato <makis@giss.nasa.gov> wrote:

> Date: Wed, 15 Aug 2007 18:51:56 -0400
> To: "James Hansen" <jhansen@giss.nasa.gov>
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: Re: Real Deal
>
> I moved some paragraphs so that figures come either at top or bottom of pages, but I may have missed some lines, so please check carefully. I can change figure sizes easily.
>
> Makiko
>
> At 18:36 2007/08/15, you wrote:
> > Makiko, if you put the figures into this version, and if I can still edit the text, then that should work well. I still have a few paragraphs to write at the end. Jim
> > Content-Type: application/msword; name=RealDeal2.doc
> > X-Attachment-Id: f_f5eeiiji
> > Content-Disposition: attachment; filename="RealDeal2.doc"

Subject: Re: Question
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:53:50 -0400
To: "POSAMENTIER, HENRY W" <HENRY.POSAMENTIER@chevron.com>, <makikosato@giss.nasa.gov>
CC: <James.E.Hansen@nasa.gov>, rruedy@giss.nasa.gov

Dear Dr. Posamentier;

As described in our 1996 (http://pubs.giss.nasa.gov/abstracts/1996/Hansen_etal_1.html), 1999 (http://pubs.giss.nasa.gov/abstracts/1999/Hansen_etal.html) and 2001 (http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) papers, the land-ocean temperature index is created by combining meteorological station measurements over land and sea surface temperature data [HadISST (http://www.hadobs.org) and the satellite data]. The satellite data are used only over the ocean and only since 1982, and satellite night light data are used for the U.S. land areas to distinguish urban, peri-urban and rural areas.

Sincerely,

Makiko Sato

At 08:04 2007/08/16, POSAMENTIER, HENRY W wrote:

> Dear Dr. Sato,
>
> I note with interest the figures you published on the GISS website (<http://data.giss.nasa.gov/gistemp/graphs/>http://data.giss.nasa.gov/gistemp/graphs/). In particular, I am interested in the figures showing global annual mean surface air temperature change (land-ocean index) and the annual mean temperature change for three latitudinal belts. To what extent have you used satellite imagery vs. ground-based meteorological station data, given that satellite imagery is a comparatively recent source of information and some of your graphs go back to 1880? Thanks in advance for your time in answering these questions.
>
> Best regards,
>
> Henry W. Posamentier, PhD
> Chevron Energy Technology Company
> 1500 Louisiana Street
> Houston, TX 77002-7308
> 1-832-854-7646
> (Cell)
> 1-832-854-7070 (Fax)

Subject: RE: Question
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 16 Aug 2007 17:50:13 -0400
To: rruedy@giss.nasa.gov

Thank you, Reto.

Makiko

At 17:46 2007/08/16, you wrote:
Dear Dr. Posamentier,

As described in detail in the papers mentioned below, we did not try to think up any adjustments, but finessed the whole question as follows: We basically tweak the urban records so that they look exactly like their rural neighbors as far as the long term trend is concerned.

For each urban station, we compute a mean series based on all neighboring rural stations. If there are not enough rural stations near that urban station, we completely disregard the urban station. If the urban station is longer than the rural combination, the unsupported part of the urban station is dropped. Finally we find a best approximation to the difference between rural and urban series with a straight line or a line with a knee at a variable point and subtract that difference from the urban record.

For alternate approaches to this question, please contact USHCN. They employ a team of people working full time on observed data analysis. We are a modeling group and spend just enough time on observed temperature data to keep our temperature website up-to-date.

Reto A. Ruedy

On Thu, 2007-08-16 at 15:27 -0400, Makiko Sato wrote:
> Reto,
>
> Could you please reply to him when you have time to?
>
> Thank you,
> Makiko
>
> At 15:23 2007/08/16, you wrote:
> >Dear Dr. Sato,
> >
> >Thanks for getting back to me so quickly. Please allow me to ask yet
> >another question. Given that pre-1982 data seem to be dependent
> >exclusively on meteorological stations on land, how do you compensate
> >for heat island effects? I realize that I may be asking a question that
> >requires more than just a simple answer - my apologies for that.
> >
> >Regards,
> >Henry Posamentier
> >
> >-----Original Message-----
> >From: Makiko Sato [mailto:makis@giss.nasa.gov]
> >Sent: Thursday, August 16, 2007 10:54 AM
> >To: POSAMENTIER, HENRY W; makikosato@giss.nasa.gov
> >Cc: James.E.Hansen@nasa.gov; rruedy@giss.nasa.gov
> >Subject: Re: Question
> >
> >Dear Dr. Posamentier;

> >
> >As described in our 1996
> >(http://pubs.giss.nasa.gov/abstracts/1996/Hansen_etal_1.html), 1999
> >(http://pubs.giss.nasa.gov/abstracts/1999/Hansen_etal.html) and 2001
> >(http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) papers, the
> >land-ocean temperature index is created by combining meteorological
> >station measurements over land and sea surface temperature data [
> >HadISST (http://www.hadobs.org) and the satellite data]. The satellite
> >data are used only over the ocean and only since 1982, and satellite
> >night light data are used for the U.S. land areas to distinguish urban,
> >peri-urban and rural areas.
> >
> >Sincerely,
> >
> >Makiko Sato
> >
> >
> >At 08:04 2007/08/16, POSAMENTIER, HENRY W wrote:
> >
> > >Dear Dr. Sato,
> > >
> > >I note with interest the figures you published on the GISS website
> > >(<http://data.giss.nasa.gov/gistemp/graphs/>http://data.giss.nasa.gov/g
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> > >In particular, I am interested in the figures showing global annual
> > >mean surface air temperature change (land-ocean index) and the annual
> > >mean temperature change for three latitudinal belts. To what extent
> > >have you used satellite imagery vs. ground-based meteorological station
> >
> > >data, given that satellite imagery is a comparatively recent source of
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> > >for your time in answering these questions.
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> > >Henry W. Posamentier, PhD
> > >Chevron Energy Technology Company
> > >1500 Louisiana Street
> > >Houston, TX 77002-7308
> > >1-832-854-7646
> > >   (Cell)
> > >1-832-854-7070 (Fax)

Subject: Re: alt.cleaning
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Thu, 16 Aug 2007 21:49:33 -0400
To: rruedy@giss.nasa.gov

Reto,

I am really sorry. I didn't know you were workimg for the data and I left a little before today, and as I told you I am not coming tomorrow. I don't know if I

Thank you anyway,
Makiko

On 8/16/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Makiko,
>
> I put the files you wanted on /clima1/Steve/alternate_cleaning
> Hope I remembered correctly.
>
> Reto

Subject: Re: GISS data update
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 18 Aug 2007 23:59:24 -0400
To: "Andrew Elek" < @sympatico.ca>
CC: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Dear Mr. Elek,

We update the global mean tables, based on meteorological station data (http://data.giss.nasa.gov/gistemp/tabledata/GLB.Ts.txt) and the land-ocean index (http://data.giss.nasa.gov/gistemp/tabledata/GLB.Ts+dSST.txt) every month. This month's tables have the corrections in response to Mr. McIntyre's comments, but the numbers did not change when we show only 2 digits after the decimal points. (Please see http://www.columbia.edu/~jeh1/realdeal.16aug20074.pdf).

We also updated the US mean table and the numbers changed only year 2000 and later.

Best regards,
Makiko Sato

On 8/18/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> Makiko, can you answer this please? Thanks. Jim
>
> On 8/18/07, Andrew Elek <anelek@sympatico.ca> wrote:
>
>
>
> I am doing some research using the GISS data. Has the Table on global anomalies (based on met.station data) been recently updated in response to Mr. McIntyre's comments? I know that the US data have been updated for the most recent ten years.
>
> Thanks
>
> Andrew Elek
>
>
>
> Andrew Elek
>
> Management Consultant
>
> Toronto
>
> (416) 920-3062
>
> e-mail(home): @sympatico.ca

Subject: Fwd: alt.cleaning
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 20 Aug 2007 16:25:56 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov

Jim,

I made a set of maps and 3 linegraphs with these data Reto gave me and put them on http://www.giss.nasa.gov/~makis/GISS_Temp/.

Makiko

X-Authentication-Warning: neo.giss.nasa.gov: cdrar set sender to rruedy@giss.nasa.gov using -f
Subject: alt.cleaning
From: Reto Ruedy <rruedy@giss.nasa.gov>
Reply-To: rruedy@giss.nasa.gov
To: makis@giss.nasa.gov
Date: Thu, 16 Aug 2007 20:03:24 -0400
X-Mailer: Evolution 2.8.3 (2.8.3-2.fc6)

Makiko,

I put the files you wanted on /clima1/Steve/alternate_cleaning
Hope I remembered correctly.

Reto

Subject: Re: Fwd: alt.cleaning
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 20 Aug 2007 20:12:49 -0400
To: James Hansen <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

OK, Reto may have made all three cases, but we can show only with and without adjustments.

Makiko

At 20:09 2007/08/20, James Hansen wrote:
> For the sake of minimizing the number of data sets, you may as well drop the case that singles out two stations. The comparisons that I will want to use are with data as we adjust it and with no stations adjusted. Whether we mentioned two stations explicitly in the paper doesn't really matter -- we did adjust them. The two extreme cases make a shorter, cleaner story.
> Jim
>
> X-Mailer: QUALCOMM Windows Eudora Version 6.2.5.6
> Date: Mon, 20 Aug 2007 16:25:56 -0400
> To: jhansen@giss.nasa.gov
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: Fwd: alt.cleaning
> Cc: rruedy@giss.nasa.gov
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> Date: Thu, 16 Aug 2007 20:03:24 -0400
> X-Mailer: Evolution 2.8.3 (2.8.3-2.fc6)
>
> Makiko,
>
> I put the files you wanted on /clima1/Steve/alternate_cleaning
> Hope I remembered correctly.
>
> Reto

Subject: Fwd: Re: Changes to GISS temperature data?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 21 Aug 2007 12:15:53 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov, alacis@giss.nasa.gov

Jim,

How should I respond to this e-mail?

Makiko

> Date: Tue, 21 Aug 2007 16:38:22 +0100 (BST)
> From: @nottingham.ac.uk>
> X-X-Sender: .nottingham.ac.uk
> To: Makiko Sato <makis@giss.nasa.gov>
> Subject: Re: Changes to GISS temperature data?
> X-UoN-MailScanner-Information: Please contact @nottingham.ac.uk
> for more information
> X-UoN-MailScanner: Found to be clean
> X-UoN-MailScanner-From: @nottingham.ac.uk
> X-Spam-Status: No
>
> Dear Dr Sato
>
> I fear you (NASA GISS) are getting very bad publicity here in the UK.
> I do not think Dr Hansen's rather flippant and aggressive response
> is helping. Why is his first resonse titled 'lights on upstairs'?
> Why is the second one 'Usufruct and the Gorilla'?
> What do these terms mean? Why does Dr Hansen adopt such a tone as
> 'The proclamations of the contrarians are a deceit'?
> This appears irrational, unscientific and unprofessional.
>
> On Wed, 15 Aug 2007, wrote:
>
> > Many thanks for that link.
> >
> > On Tue, 14 Aug 2007, Makiko Sato wrote:
> >
> > > Dear
> > > The correction we made recently is explained in http://www.columbia.edu/~jeh1
> > > /distro LightUpstairs 70810.pdf with U.S mean and global mean graphs which
> > > compare the temperature anomalies using the old analysis and the corrected
> > > analysis. Could you please read the page?
> > > Thank you,
> > > Makiko Sato
> > >
> > > At 09:49 2007/08/14, you wrote:
> > >
> > > > Dear Dr Sato,

Subject: Fwd: alt.cleaning
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 20 Aug 2007 16:25:56 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov

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From: Reto Ruedy <rruedy@giss.nasa.gov>
Reply-To: rruedy@giss.nasa.gov
To: makis@giss.nasa.gov
Date: Thu, 16 Aug 2007 20:03:24 -0400
X-Mailer: Evolution 2.8.3 (2.8.3-2.fc6)

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Reto

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Date: Mon, 20 Aug 2007 20:12:49 -0400
To: James Hansen <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

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> Jim
>
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> From: Makiko Sato <makis@giss.nasa.gov>
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> Hope I remembered correctly.
>
> Reto

Subject: Fwd: Re: Changes to GISS temperature data?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 21 Aug 2007 12:15:53 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov, alacis@giss.nasa.gov

Jim,

How should I respond to this e-mail?

Makiko

> Date: Tue, 21 Aug 2007 16:38:22 +0100 (BST)
> From: @nottingham.ac.uk>
> X-X-Sender: .nottingham.ac.uk
> To: Makiko Sato <makis@giss.nasa.gov>
> Subject: Re: Changes to GISS temperature data?
> X-UoN-MailScanner-Information: Please contact @nottingham.ac.uk for more information
> X-UoN-MailScanner: Found to be clean
> X-UoN-MailScanner-From: @nottingham.ac.uk
> X-Spam-Status: No
>
> Dear Dr Sato
>
> I fear you (NASA GISS) are getting very bad publicity here in the UK.
> I do not think Dr Hansen's rather flippant and aggressive response
> is helping. Why is his first resonse titled 'lights on upstairs'?
> Why is the second one 'Usufruct and the Gorilla'?
> What do these terms mean? Why does Dr Hansen adopt such a tone as
> 'The proclamations of the contrarians are a deceit'?
> This appears irrational, unscientific and unprofessional.
>
> On Wed, 15 Aug 2007, ... wrote:
>
> > Many thanks for that link.
> >
> > On Tue, 14 Aug 2007, Makiko Sato wrote:
> >
> > > Dear
> > > The correction we made recently is explained in http://www.columbia.edu/~jeh1/distro LightUpstairs 70810.pdf with U.S mean and global mean graphs which compare the temperature anomalies using the old analysis and the corrected analysis. Could you please read the page?
> > > Thank you,
> > > Makiko Sato
> > >
> > > At 09:49 2007/08/14, you wrote:
> > >
> > > > Dear Dr Sato,

Subject: Re: one last request (data for the graph below)
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Fri, 24 Aug 2007 06:24:57 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Andrew Revkin" <anrevk@nytimes.com>, "Reto Ruedy" <cdrar@giss.nasa.gov>, gschmidt@giss.nasa.gov

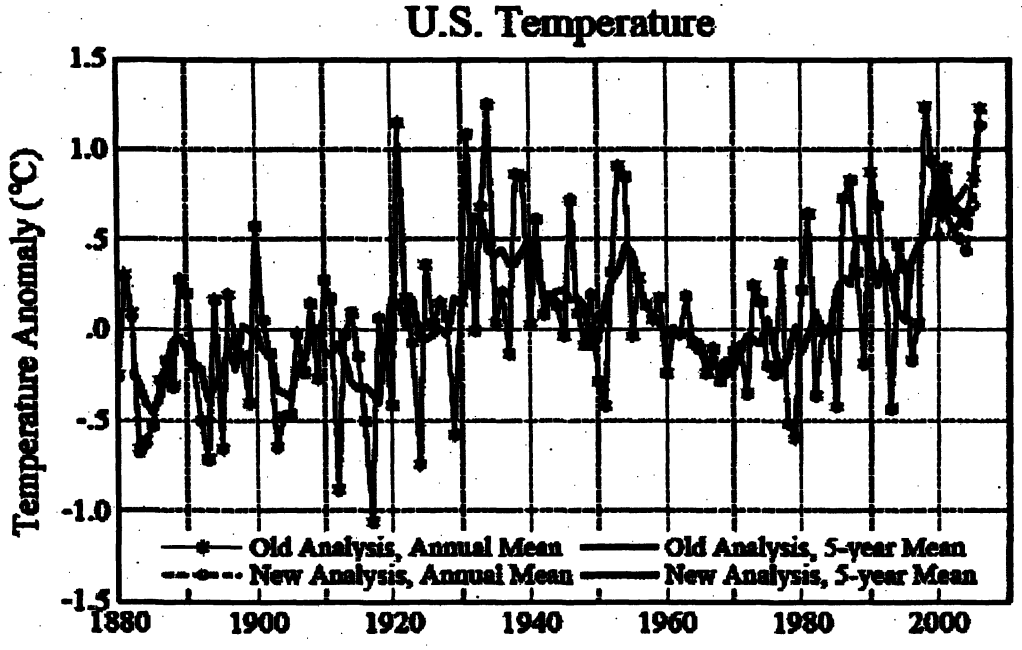
I can give you the data easily when I come in to work later today. The base period is 1951-1980.

Makiko Sato

On 8/24/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:
Andy, I am Makiko or Reto should have the data -- it is Makiko's plot. Jim

On 8/23/07, **Andrew Revkin** <anrevk@nytimes.com > wrote:
one last query.

do you have the data easily available for this graph?
(our graphix folks would need to redraw to our style.. and that is anomaly compared to what baseline?)



ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: *The North Pole Was Here*
Amazon book: *The Burning Season*

Acoustic-roots band Uncle Wade

Subject: Re: just to be sure..
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Fri, 24 Aug 2007 06:41:33 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

Jim,

Of course Reto thinks the ranking that shows which year was warmer by 0.01 deg is stupid. But as long as I give the table of US mean temperature on our web site, people can make rankings themselves What Reto wanted to tell you was from Jan. 7 - Aug. 7, 2007, we had 1998 warmer than 1934 by 0.01 deg in the table I show on our web page. (The reason was those numjbers keep changing by such a small amount by adding station data, and probably as Reto pointed out, we processed data in January before a lot of data came in. These recent data can change numbers in old time by small amounts.) From next time I will update the US mean table every month. I was doing it only once a year because I didn't think people would make such a mess out of 0.01 deg difference in US. 0.01 deg is negligible globally but enen 2% of that for the US!!

Makiko

On 8/24/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> Not sure that I understand this. It mentions 1934 and 1998 were tied for several months in our monthly updates, but later you say that 1998 was warmest (presumably by a meaningless 0.01, although I do not remember that - and why would we have cared or why would we have checked that)? In general I think that we want to avoid going into more and more detail about ranking of individual years. As far as I remember, we have always discouraged that as being somewhat nonsensical, other that the question of what is the warmest year, with uncertainty. Also I don't think that people, such as Gore, are being unreasonable when they make statements such as (about) 9 of 10 warmest years were in the past two decades, or however they say that -- but this of course refers to global temperature, which is much less noisy and more relevant to the question of human+made climate change. The contrarians are cleverly mixing up these two matters, global and U.S., thus completely confusing the public discussion, and again winning more time in their attempt to keep things confused, not without aid from their unwitting ally, the media. As I tried to make clear in 'Usufruct', that is the real battle, as we are running out of time. They will live in infamy, but they either do not understand or they don't give a damn. Jim
>
> On 8/23/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > I don't know whether Andrew Revkin is interested in the details below:
> >
> > The US temperature graph in our 1999 paper, based on GHCN data, shows 1934 0.5C warmer than 1998; 1998 was in 5th place behind 1921, 1931, 1938, 1953.
> >
> > In the corresponding graph in our 2001 paper, now based on the carefully corrected USHCN data, 1934 and 1998 are in first, 1921 in third place (NOAA who provided the USHCN data had 1998 slightly ahead of 1934).
> >
> > The US table we had posted during all of 2006 showed 1998 and 1934 even at 1.24C. (I got a copy from a journalist in Brazil, we don't save these

data).

As far as I know, the US table on our site from Jan to Aug 2007 was the first and only one with 1998 ahead of 1934 - some US stations must have still been missing in the GHCN file we downloaded on January 8, 2007. (Each month, GHCN regenerates the whole file over a period of a few days; in previous years we had to wait til mid January for the US stations to be added in again).

Reto

On Thu, 2007-08-23 at 20:51 +0200, James Hansen wrote:

> We can add an uncertainty, indeed we already include a bar at several points on our temperature curve, but we note that it only includes the largest source of uncertainty in the temperature change (incomplete spatial coverage).
>
> As far as I know we do not make such a list. We don't like such lists, because the results are not significant and are certain to differ from one group to another. It is generally the media that makes a list. We look for a new record high, but note that it is a virtual tie if the difference is small.
>
> Just look at out published paper. It has 1934 as the warmest year, by an insignificant amount, with 1998 second. The same result that we have now. This ranking was not affected by the flaw in post 2000 data.
>
> Of course it is good to improve the station data. Temperature is an absolute measurement, however, so errors over time are not cumulative. When there are several thousand stations it is easy to find what seem like a huge number of stations with problems.
>
> Jim
>
> On 8/23/07, Andrew Revkin < anrevk@nytimes.com> wrote:
>
> noaa folks are saying they're working on adding a description of uncertainty levels to year-to-year temp time series.
> and lawrimore says they could do better in press outreach to stress this.
>
> do you agree that this should be more clearly communicated...
> should GISS or NOAA or others even try to make a list of individual years as sharp data points?
>
> separately, i'm still a bit confused about whether GISS ever had 1934 as hottest 48-state year or not.
> can you help clarify?
>
> finally, do you agree that generally we (globally) should be doing a lot more to improve surface temperature tracking?
> i never, til today, visited www.surfacestations.org and found it quite amazing. if our stations are that shoddy, what's it like in Mongolia?
>
> ANDREW C. REVKIN
> The New York Times / Environment

620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: The North Pole Was Here
Amazon book: The Burning Season
Acoustic-roots band Uncle Wade

--
Reto Ruedy < rruedy@giss.nasa.gov>

Subject: Re: Fwd: alt.cleaning
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 21 Aug 2007 16:42:53 -0400
To: rruedy@giss.nasa.gov, James Hansen <jhansen@giss.nasa.gov>

Since Reto made maps already, I thought there is nothing I can do, but I made a simple set of 2x4 maps on http://www.giss.nasa.gov/~makis/GISS_Temp/.

Makiko

At 12:28 2007/08/21, Reto Ruedy wrote:

> Jim and Makiko,
>
> As Makiko assumed, I had already made all those maps
> (on */clima1/Steve/alternate_cleaning/.*), but I did not instantly tell
> you, since I was a little puzzled at first at the outcome.
>
> The LOTI-trends were unaffected for both periods:
> the 1880-2006 change was .69 C, the 1900-2006 change was .65 C for all 3
> cases.
>
> The Ts-trends decreased from .88 C to .84 C, and .72 C to .69 C; the
> puzzling fact was that "no cleaning" and "adjust St.Helena and Lihue
> only" gave the same result. Whereas the trend for Lihue was decreased by
> our adjustment as expected (in both cases we raised the early part of
> the series), the St.Helena trend surprisingly increased and the 2
> effects canceled each other out.
>
> The solution of the St.Helena puzzle is:
>
> For Lihue, GHCN lists 1 long series 1905-2007 with very few missing
> months (and a few extra short series), i.e. the long series passed
> GHCN's quality control and our change had the expected effect.
>
> This was not the case for St.Helena (16S,6W); there GHCN lists 2 series.
> The first one ends before the move, the 2nd starts after the move. Our
> fix glued the 2 pieces together with a proper adjustment.
>
> Without that fix, the "glueing" is done by the "neighbors"; the closest
> (Wide Awake Fi at 8S,14W, 1300km) consists of 3 pieces. The long one
> goes from 1923-May1976, with few gaps up to 1972, 1973-6 have 6-8 months
> missing. A 2nd source 1971-1980 agrees with source 1 in 1971-2, is
> missing most of 1973-1974, some of 1975 and has complete,but atypically
> low data for 1976-1980, at which point it ends. The 3rd piece 1991-2007
> is more in line with piece 1 but has many years missing - so it probably
> was not used due to lacking a sufficient overlap with other stations.
>
> The only other station with a substantial overlap with both St.Helena
> pieces is Tabou (4N,7W, 2200 km) which happens to have an unusual dip in
> the mid-70s of a totally different nature than Wide Awake.
>
> Reto
>
> On Mon, 2007-08-20 at 20:12 -0400, Makiko Sato wrote:
> > OK, Reto may have made all three cases, but we can show only with and
> > without adjustments.
> >

> Makiko
>
> At 20:09 2007/08/20, James Hansen wrote:
> >For the sake of minimizing the number of data sets, you may as well
> >drop the case that singles out two stations. The comparisons that I
> >will want to use are with data as we adjust it and with no stations
> >adjusted. Whether we mentioned two stations explicitly in the paper
> >doesn't really matter -- we did adjust them. The two extreme cases
> >make a shorter, cleaner story.
> >Jim
> >
> >
> >>X-Mailer: QUALCOMM Windows Eudora Version 6.2.5.6
> >>Date: Mon, 20 Aug 2007 16:25:56 -0400
> >>To: jhansen@giss.nasa.gov
> >>From: Makiko Sato <makis@giss.nasa.gov>
> >>Subject: Fwd: alt.cleaning
> >>Cc: rruedy@giss.nasa.gov
> >>
> >>Jim,
> >>
> >>I made a set of maps and 3 linegraphs with these data Reto gave me
> >>and put them on http://www.giss.nasa.gov/~makis/GISS_Temp/.
> >>
> >>Makiko
> >>
> >>
> >>>X-Authentication-Warning: neo.giss.nasa.gov: cdrar set sender to
> >>>rruedy@giss.nasa.gov using -f
> >>>Subject: alt.cleaning
> >>>From: Reto Ruedy <rruedy@giss.nasa.gov>
> >>>Reply-To: rruedy@giss.nasa.gov
> >>>To: makis@giss.nasa.gov
> >>>Date: Thu, 16 Aug 2007 20:03:24 -0400
> >>>X-Mailer: Evolution 2.8.3 (2.8.3-2.fc6)
> >>>
> >>>Makiko,
> >>>
> >>>I put the files you wanted on /clima1/Steve/alternate_cleaning
> >>>Hope I remembered correctly.
> >>>
> >>>Reto
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: temperature program to the public
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 27 Aug 2007 14:16:43 -0400
To: rruedy@giss.nasa.gov, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: jhansen@giss.nasa.gov

Reto, Robert,

This is a copy of an e-mail I received from Jim.

Makiko

> Date: Sat, 25 Aug 2007 16:24:32 +0200
> From: "James Hansen" <jhansen@giss.nasa.gov>
> Sender: _____ ____!gmail.com
> To: "Makiko Sato" <makis@giss.nasa.gov>
> Subject: Re: Hawaii report last figure
> X-Google-Sender-Auth: c4269619cb5ed0ca
>
> I intend to write a bit more after Reto has a program that can be made available.
>
> On 8/25/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
> What is the status of your writing about the temperature? Since NY
> Times and GSFC are going to write, you don't have to write any more?
>
> Makiko

The New York Times

U.S.

August 26, 2007

Quarter-Degree Fix Fuels Climate Fight

By <http://topics.nytimes.com/top/reference/timestopics/people/r/andrew_c_revkin/index.html?inline=nyt-per>ANDREW C. REVKIN

Never underestimate the power of the blogosphere and a quarter of a degree to inflame the fight over <http://topics.nytimes.com/top/news/science/topics/globalwarming/index.html?inline=nyt-classifier>global warming.

A quarter-degree Fahrenheit is roughly the downward adjustment <http://topics.nytimes.com/top/reference/timestopics/organizations/n/national_aeronautics_and_space_administration/index.html?inline=nyt-org>NASA scientists made earlier this month in their annual estimates of the average temperature in the contiguous 48 states since 2000. They corrected the numbers after an error in meshing two sets of temperature data was discovered by <http://www.climateaudit.org>Stephen McIntyre, a blogger and retired business executive in Toronto. Smaller adjustments were made to some readings for some preceding years.

All of this would most likely have passed unremarkably if Mr. McIntyre had not blogged that the adjustments changed the rankings of warmest years for the contiguous states since 1895, when record-keeping began.

Suddenly, 1934 appeared to vault ahead of 1998 as the warmest year on record (by a statistically meaningless 0.036 degrees Fahrenheit). In NASA's most recent data set,

1934 had followed 1998 by a statistically meaningless 0.018 degrees. Conservative bloggers, columnists and radio hosts pounced. "We have proof of man-made global warming," <http://topics.nytimes.com/top/reference/timestopics/people/l/rush_limbaugh/index.html?inline=nyt-per>Rush Limbaughtold his radio audience. "The man-made global warming is inside NASA."

Mr. McIntyre, who has spent years seeking flaws in studies pointing to human-driven climate change, traded broadsides on the Web with <http://www.columbia.edu/~jeh1>James E. Hansen, the NASA team's leader. Dr. Hansen said he would not "joust with court jesters" and Mr. McIntyre posited that Dr. Hansen might have a "Jor-El complex" a reference to Superman's father, who foresaw the destruction of his planet and sent his son packing.

Blogs are still reverberating, but Mr. McIntyre, Dr. Hansen and others familiar with the initial data revisions are clarifying what is, and is not, at issue.

One thing not in question, Mr. McIntyre and Dr. Hansen agree, is the merit of shifting away from energy choices that contribute heat-trapping greenhouse gases to the atmosphere.

Mr. McIntyre said he feels "climate change is a serious issue." His personal preference is to shift increasingly to nuclear power and away from coal and oil, the main source of heat-trapping carbon dioxide.

Mr. McIntyre and Dr. Hansen also agree that the NASA data glitch had no effect on the global temperature trend, nudging it by an insignificant thousandth of a degree.

Everyone appears also to agree that too much attention is paid to records, particularly given that the difference between 1934, 1998, and several other sets of years in the top 10 warmest list for the United States are so small as to be statistically meaningless.

Mr. McIntyre said that when he posted the revised list under the heading "A New Leaderboard at the U.S. Open," "I just was sort of having some fun with it as much as anything."

He added: "The significance of things has been misstated by Limbaugh and people like that."

Dr. Hansen and his team note that they rarely, if ever, discuss individual years, particularly regional findings like those for the United States (the lower 48 are only 2 percent of the planet's surface). "In general I think that we want to avoid going into more and more detail about ranking of individual years," he said in an e-mail message. "As far as I remember, we have always discouraged that as being somewhat nonsensical."

Jay Lawrimore, a scientist at the <http://www.ncdc.noaa.gov>National Climatic Data Center of the Commerce Department who works on assembling the climate records that NASA analyzed, said his agency could probably do a better job of emphasizing the uncertainty surrounding its annual temperature announcements.

Indeed, there is enough wiggle room in the numbers that the center has a different list of the 10 warmest years than those produced using NASA's and Mr. McIntyre's analyses. By the climate center's reckoning, 1998 remains the warmest year for the 48 states (with 2006 second and 1934 third).

Dr. Lawrimore, Dr. Hansen and other experts said that trends are far more important than particular years, and the recent widespread warming trend has been clear and very distinct from the regional hot spell that drove up United States temperatures in the 1930s.

Mr. McIntyre and the government scientists do agree on at least one more thing: the need to improve the quality of climate data gathered around the world, including in

the United States, which has by far the planet's biggest network of meteorological stations.

Mr. McIntyre is not alone in pointing out that the need to adjust and revise such data with the attendant risk of mistakes would be reduced with more care and consistency taken in collecting climate data.

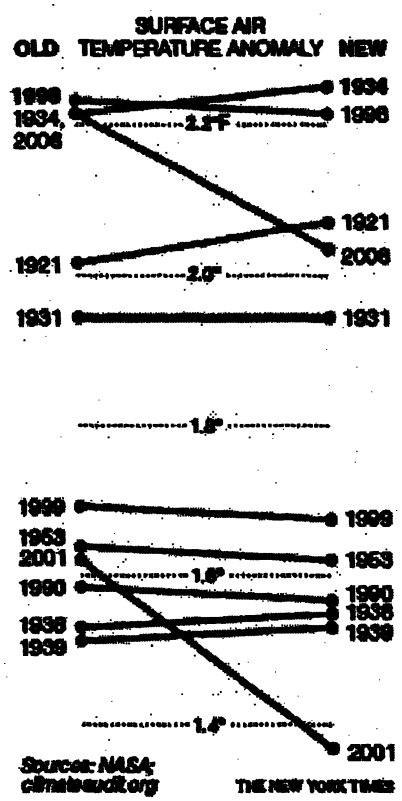
The <http://topics.nytimes.com/top/reference/timestopics/organizations/n/national_academy_of_sciences/index.html?inline=nyt-org>National Academy of Sciences has repeatedly called for improvements in climate monitoring. An independent group of meteorologists and weather buffs is compiling its own gallery of American weather stations at <http://www.surfacestations.org>www.surfacestations.org, with photographs showing glaring problems, like thermometers placed next to asphalt runways and parking lots.

Dr. Lawrimore said that the government is preparing to build a <http://www.ncdc.noaa.gov/crn>climate reference network of more sophisticated, and consistent, monitoring stations that should cut uncertainty in gauging future trends.

In any case, he said, the evidence for human-driven warming remains robust. "Saying what they're saying has just provided an opportunity for them to create doubt in people's minds," he said of the bloggers.

[]

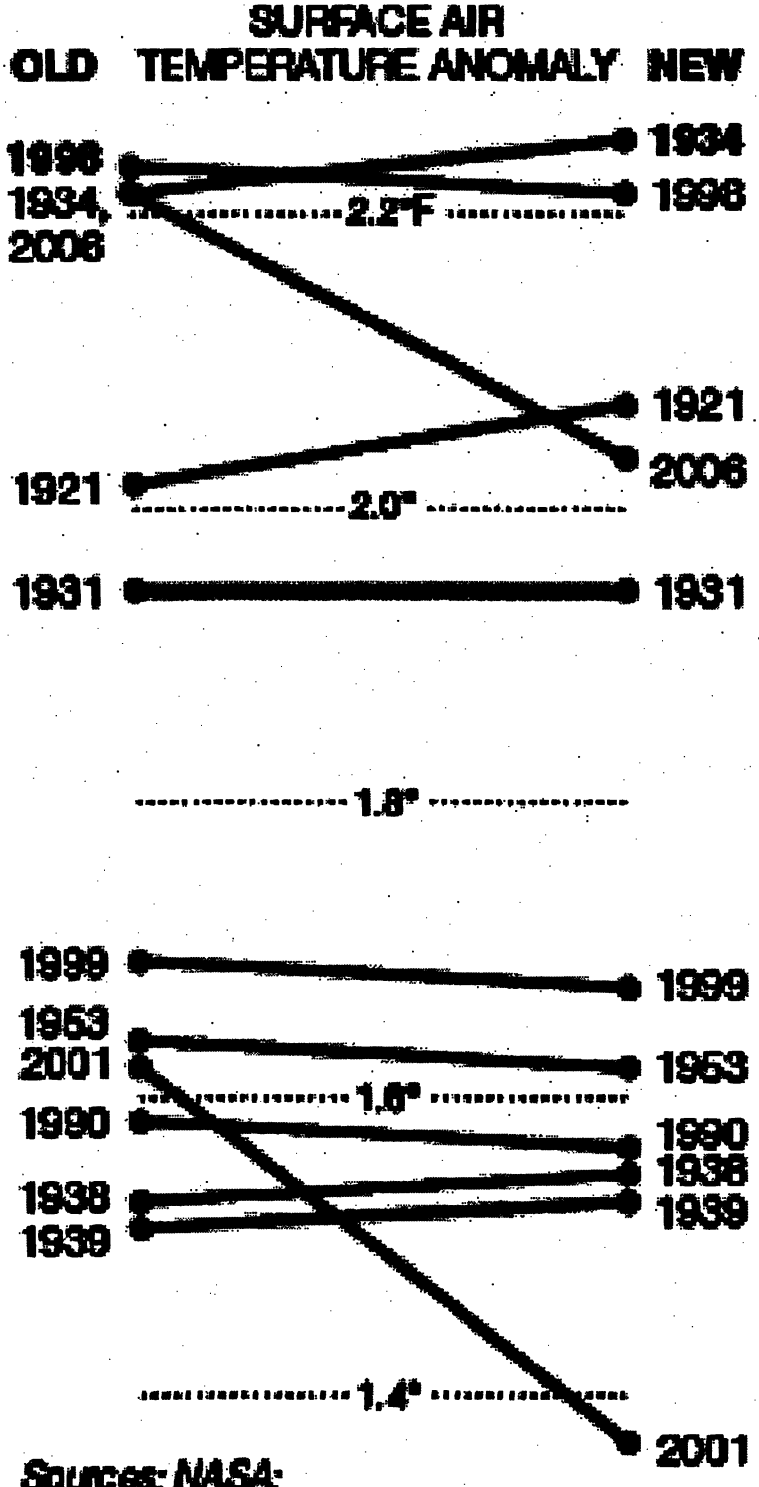
—629f40.jpg———————————————————————————————————————



629f40.jpg	Content-Type: image/jpeg Content-Encoding: base64

Hottest Years on Record

This month, scientists at NASA adjusted their annual estimates of average air temperature in the lower 48 states, a change that shifted the ranking of the warmest years since 1895.



Subject: Re: new USHCN 1880-2005
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 27 Aug 2007 17:07:24 -0400
To: rruedy@giss.nasa.gov

Thank you, Reto.

Makiko

No - but I needed an extra digit to decide that question (1.244 vs 1.238C). Maybe, we'll switch to a single digit in the US-table, then we have 3 years in the number 1 position.

Reto

On Mon, 2007-08-27 at 16:39 -0400, Gavin Schmidt wrote:
> but did 1934 and 1998 swap places?
>
> gavin
>
> On Mon, 2007-08-27 at 16:37, Reto Ruedy wrote:
> > Hi Jim,
> >
> > Over the weekend, I used the newest version of the USHCN data to redo
> > our analysis; I did it twice, with and without the data USHCN filled in.
> >
> > No surprises; between 1920 and 2005 the change in the US ann. means was
> > less than 0.02 C, the largest difference was in the 1880's (<0.16 C).
> > With the new data, the US trend will be slightly higher.
> >
> > The only interesting thing was, that my first attempt to process these
> > data failed. It turned out that our program could not handle the attempt
> > to remove data that were not present.
> >
> > All went fine when I took the US stations off our list of manual
> > corrections.
> >
> > It seems that all our manual deletions of parts of USHCN data were also
> > either deleted or modified in the new USHCN data. Their more rigorous
> > purging of odd-looking beginnings of station records seems to be the
> > main reason for the changes.
> >
> > I suggest, we switch to the new USHCN data for future updates. It does
> > not matter much to keep or not to keep USHCN fillers; not keeping them
> > is a little more in line of what we did so far.
> >
> > Reto
> >
> >
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: The 1934 flap
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Mon, 27 Aug 2007 22:06:41 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>

I should have looked at the graphs and maps I myself made for the Gorilla http://www.columbia.edu/~jeh1/realdeal.16aug20074.pdf.

Makiko

On 8/27/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> Yes, I should make clear what I meant. I know that if you take the linear trend the U.S. temperature change is less than the global trend. But if you compare the mean for the past 10 years to the mean for either 1880-1900 or 1880-1920, the warming is about 1.0C (1.8F) for the U.S. and 0.8C for the global mean. Ten years is enough to pretty well average out the large year-to-year fluctuations, so I think it is a fair way to look at the magnitude of the warming. In a case where you have a large change near the end of the record the linear trend is not a very good way to look at the magnitude of the change. Jim
>
> ---------- Forwarded message ----------
> From: Makiko Sato <makis@giss.nasa.gov>
> Date: Aug 27, 2007 6:35 PM
> Subject: Re: The 1934 flap
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: rruedy@giss.nasa.gov
>
> > Note also, although the year to year fluctuations are large for an area the size of the contiguous states, the long-term (century scale) warming has been as large for the U.S. as for the global mean (actually a bit larger).
> >
> > Jim Hansen
>
> Jim,
>
> Fig 1: Global map
>
> The global trend is 0.65 (and 0.64 for 1906-2006), and the US averages yellow, which means about 0.35, almost half of the globe, but why did you write as above?
>
> Makiko

Subject: Re: USA temperatures - question from USA TODAY
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 29 Aug 2007 08:59:28 -0400
To: "Rice, Doyle" <drice@usatoday.com>
CC: "James Hansen" <jhansen@giss.nasa.gov>

Mr. Rice, I am attaching the US and global temperature graphs. If you have any trouble opening it, please let me know. Makiko On 8/29/07, James Hansen wrote: > Doyle, > > We start from NCDC raw data, but the analysis method differs, as described > in our 2001 paper. As you can discern from that paper, the factor that > probably makes the difference regarding our relative rankings of 1934 and > 1998 is the method of correcting for urban warming effects, ours yielding a > somewhat larger correction. However, the end results are in very good > agreement, as you can see by looking at the temperature curves. > > Makiko, would you please make available your recent figure with global and > U.S. temperature curves? Doyle, you will see that these years are > practically indistinguishable. There is no way for anyone to be certain > which year was warmer. > > Jim > > > On 8/28/07, Rice, Doyle wrote: > > > > > > > > > > Dr. Hansen > > > > > > > > We're trying to clarify some points about the US historical temperature > record.... Does NASA use a different data set from NCDC? With the recent > controversy, we want to be sure we're not comparing apples to oranges as we > cover this. > > > > > > > > > According to NCDC, 2006 was the second-warmest after 1998- > > > > > http://www.ncdc.noaa.gov /oa/climate/research/ushcn/hcntmptrends.php > > > > > http://www.ncdc.noaa.gov/oa/climate/research /2006/ann/ann06.html > > > > > > > > But I see in theNASA data, with the recent correction, 1934 is the > warmest, with 1998 second followed by 1921 and 2006. > > > > http://data.giss.nasa.gov/gistemp /graphs/Fig.D.txt > > > > > > > > > > > > Thanks, > > > > > > > > Doyle Rice > > > > Weather Editor > > > > USA TODAY > > Content-Type: application/pdf; name="Global.and.USmeanT.pdf" Content-Disposition: attachment; filename="Global.and.USmeanT.pdf"; filename="Global.and.USmeanT.pdf" X-Attachment-Id: f_f5xu2uh6 Attachment Converted: "c:\program files\qualcomm\eudora\attach \Global.and.USmeanT1.pdf"

Subject: Re: [Fwd: GISTEMP data reproduction request]
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 04 Sep 2007 13:19:06 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

Jim,

Before you come in to talk with Reto about this person, I want to show you the web pages and the graph Reto showed me this crazy one made.
http://www.stikir.com/index.php/Welcome_to_Stikir%21
http://www.stikir.com/index.php/Top_down_Analysis_of_GHCN_climate_data
with

Global annual average temperature, all factors ignored

Here's a chart of the average annual temperature from the data set. Trend inferences could be made from this plot if one supposed that all factor effects were negated by the random sampling.
Emacs!

The chart indicates that measurements recorded in this dataset in the late 20th century were, on average 6-7 deg C hotter than those recorded in the 1700s. The following analyses explore the dataset with the goal of identifying those factors that have the largest contribution to the temporal differences observed in average temperature levels.

I don't think you should think about him seriously.

Makiko

At 12:29 2007/09/04, James Hansen wrote:
> Let's talk about this early this afternoon. I beleive that we also got a request from McIntyre late last week? Jim
>
> On 9/4/07, Reto Ruedy <<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov> wrote:
> Hi Jim,
>
> This refers to a web site belonging to a person in England - at first sight, his analyses of GHCN data seem strangely naive, some inspired by McIntyre's blogs.
>
> Anything we should do about this inquiry ?
>
> Reto
>
> -------- Forwarded Message --------
> From: Michael Cassin <<mailto:michael@cassin.name>michael@cassin.name>
> To: Reto Ruedy <<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov>
> Subject: GISTEMP data reproduction request
> Date: Tue, 4 Sep 2007 15:11:31 +0100
>
> Hello Dr Ruedy,
>
> My name is Michael Cassin. I'm developing some technology for hosting online datasets and statistical analysis, and would like to inquire about the possibility of reproducing the GISS temperature data. I

realise it is available through the web interface, but would like to know if there is an ftp, or other, site where the entire dataset can be downloaded. I'd also like to be sure of any copyright issues.

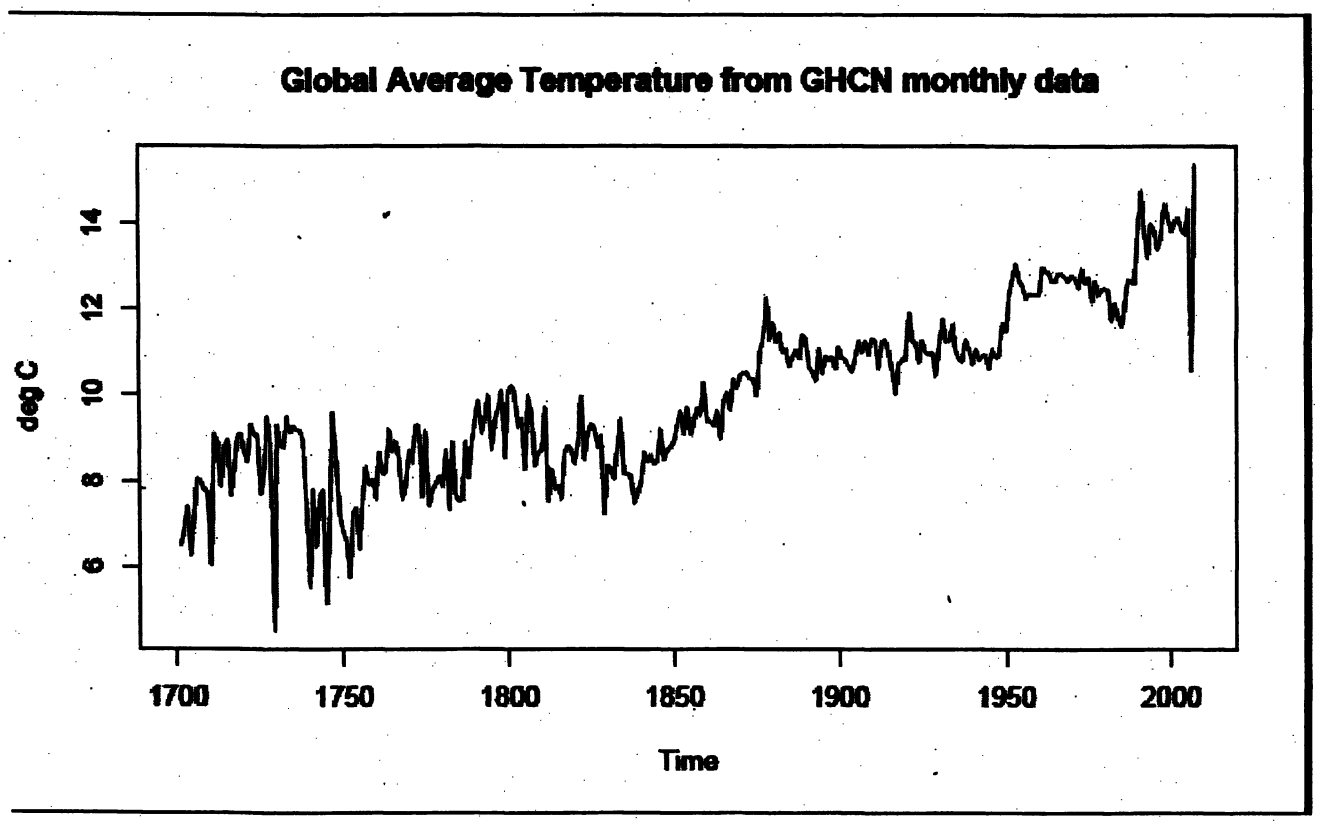
Apologies for the direct intrusion into your inbox. I would understand if you redirect my inquiry.

Best regards,

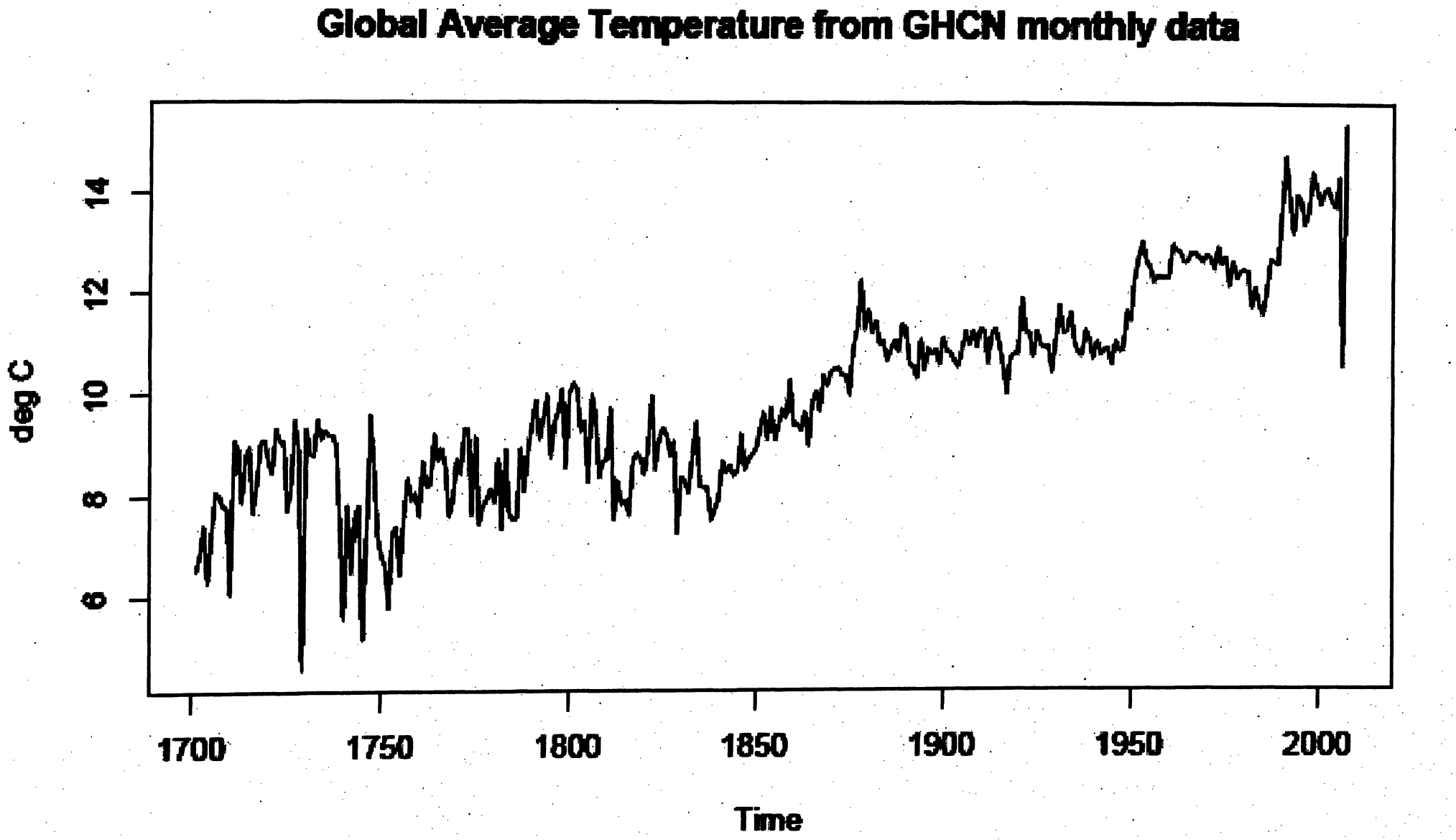
Mike Cassin
Managing Director
Stikir Ltd

--
Reto Ruedy <<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov>

81d686.jpg



81d686.jpg	Content-Type: image/jpeg Content-Encoding: base64


Global Average Temperature from GHCN monthly data
deg C
6
8
10
12
14
1700
1750
1800
1850
1900
1950
2000
Time

Subject: Re: [Fwd: GISTEMP data reproduction request]
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 04 Sep 2007 18:29:46 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: rruedy@giss.nasa.gov

Robert,

Jim came to my office and said, "Let's go to see Reto", and three of us talked about it a little. Jim wants Reto to put the temperature program on the web, Reto says he is converting Jay's program to FORTRAN and he should do some checks also. Jim wants to write something more clearly once more after Reto puts the computer program on the web. He is sending out something about Pushker's stuff to his e-mail list and as a foot note he will write a little about temperature -- about the difference between with and without cleaning results, which I think is nothing to do with McIntyre because McI doesn't know about cleaning.

Something like that. Right, Reto? If you want to know more in detail, please ask Reto.

Makiko

At 18:20 2007/09/04, you wrote:

> Early afternoon is now long past. Did any discussion occur
> about this that I missed?
>
> rbs
>
> On Sep 4, 2007, at 12:29, James Hansen wrote:
>
> > Let's talk about this early this afternoon. I beleive that we also
> > got a request from McIntyre late last week? Jim
> >
> > On 9/4/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote: Hi Jim,
> >
> > This refers to a web site belonging to a person in England - at first
> > sight, his analyses of GHCN data seem strangely naive, some
> > inspired by
> > McIntyre's blogs.
> >
> > Anything we should do about this inquiry ?
> >
> > Reto
> >
> > -------- Forwarded Message --------
> > From: Michael Cassin <michael@cassin.name>
> > To: Reto Ruedy <rruedy@giss.nasa.gov>
> > Subject: GISTEMP data reproduction request
> > Date: Tue, 4 Sep 2007 15:11:31 +0100
> >
> > Hello Dr Ruedy,
> >
> > My name is Michael Cassin. I'm developing some technology for hosting
> > online datasets and statistical analysis, and would like to inquire
> > about the possibility of reproducing the GISS temperature data. I

realise it is available through the web interface, but would like to know if there is an ftp, or other, site where the entire dataset can be
downloaded. I'd also like to be sure of any copyright issues.

Apologies for the direct intrusion into your inbox. I would understand
if you redirect my inquiry.

Best regards,

Mike Cassin
Managing Director
Stikir Ltd

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Fwd: source code
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 5 Sep 2007 06:59:00 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Jim,

It may not be important but this is a
graduate student at Berkeley (not in climatology), and also a member
of something called

Makiko

---------- Forwarded message ----------
From: @gmail.com>
Date: Sep 5, 2007 12:42 AM
Subject: Re: source code
To: James Hansen <jhansen@giss.nasa.gov>
Cc: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

Dear Dr. Hansen,

Thank you very much for your quick reply. I look forward to seeing the code.

As it happens, I frequently use Python (in particular, the SciPy and
Numeric Python packages) in my own data analysis projects. I think it
is one of the best available programming environments for data
processing, and I would heartily recommend it. Much of it is very
similar to Matlab, which you may be more familiar with.

Best regards,

On 9/4/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> You are welcome to have a copy of our computer code. Depending upon your
> programming background, there is a possible small complication in that parts
> of the computer program as it is used were written by a person (Jay Glascoe)
> who left several years ago in a code (Python) that is obscure to most of us
> (perhaps all of us at GISS). Reto Ruedy is in the process of rewriting that
> part in Fortran, as we know the function of it; and the Python and Fortran
> codes should give the same results. In the interim, we will release the
> codes as they have been used (including Jay's Python subroutines). The
> procedure to access the codes will be described in my next e-mail, which I
> will send this week.
>
> Jim Hansen
>
> (By the way, Reto also notes that the codes are a collection that
> accumulated over 25 years. Actually, I started with an NYU undergraduate
> student in the 1970s, but Sergej Lededeff replaced most of that code in the
> early 1980s. Reto says that he intends to simplify/combine steps in the
> code, but it may be several weeks before he can do that.)
>
> On 9/4/07, .berkeley.edu> wrote:
> > Dear Dr. Hansen,
> >
> > My name is and I am a graduate student in physics at

UC Berkeley. I am writing to request the complete computer program source code you and your coauthors used to adjust and analyze the surface temperature data in the following paper:

Hansen, J., Mki. Sato, R. Ruedy, K. Lo, D.W. Lea, and M. Medina-Elizade 2006. Global temperature change. Proc. Natl. Acad. Sci. 103, 14288-14293,
http://www.pnas.org/cgi/content/abstract/103/39/14288

I and others would like to understand all details of your analysis of global temperature trends. I am making this request for source code consistent with the PNAS policy copied below.

Thank you very much in advance.

Sincerely,

.berkeley.edu

PNAS policy from
http://www.pnas.org/misc/iforc.shtml#policies

(viii) Materials and Data Availability. To allow others to replicate and build on work published in PNAS, authors must make materials, data, and associated protocols available to readers. Authors must disclose upon submission of the manuscript any restrictions on the availability of materials or information.

Authors must make Unique Materials (e.g., cloned DNAs; antibodies; bacterial, animal, or plant cells; viruses; and computer programs) promptly available on request by qualified researchers for their own use. Failure to comply will preclude future publication in the journal. It is reasonable for authors to charge a modest amount to cover the cost of preparing and shipping the requested material. Contact pnas@nas.edu if you have difficulty obtaining materials.

Subject: Re: Program release
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 06 Sep 2007 13:02:08 -0400
To: rruedy@giss.nasa.gov, James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, Darnell Cain <dcain@giss.nasa.gov>, klo@giss.nasa.gov

Reto,

I talked to Jim about (3). He thinks we can wait until tomorrow because Jim is busy preparing for his seminar tomorrow and I should do some (complicated? not numerically but) calculations today. Once we know exactly what Jim wants for (3), it will take me only 15 or 20 minutes.

Makiko

At 12:56 2007/09/06, Reto Ruedy wrote:

Jim,

I understand the need to make the programs and input files available. But to put out an unusable product (though it works on our machines, based on the directory structures, compilers, etc. of the various machines) that has to be repeatedly changed may be counterproductive. I wish I had another week - or at least a weekend where I could work without interruption.

(1) As far as list of stations we remove is concerned, most are removed or remain unused automatically because their records are too short to have sufficient overlap with the dominating stations. Do you only want a list of those stations that are explicitly removed at the beginning of the process due to their strange data ?

(2) Corrections: We correct 2 stations (St.Helena and Lihue) and use USHCN instead of the corresponding GHCN data. The rest is dropping parts or all of a record (=cleaning). Hence:

"no corrections"="not correcting the 2 stations, not using USHCN, no cleaning",

"current"="2 corrections+USHCN+cleaning",

"no cleaning"="2 corrections+USHCN".

Are any 2 of these 3 options what you need ?

I guess (3) can be done by Makiko, if not let me know.

Reto

On Thu, 2007-09-06 at 10:28 -0500, James Hansen wrote:
> Reto, Robert,
>
> We are getting more and more questions as to why we will not release
> our temperature data analysis programs. We need to make these
> available this week, by the end of the day tomorrow.
>
> Can you put these in a place where they are accessible, with an
> address that I will put in an e-mail? This will be as part of an
> e-mail that also provides access to the revised "Peak Oil" paper.

Subject: Re: Program release
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 06 Sep 2007 15:47:13 -0400
To: rruedy@giss.nasa.gov, James Hansen <jhansen@giss.nasa.gov>
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, klo@giss.nasa.gov, rruedy@giss.nasa.gov

<x-flowed>
Reto,

I can't open your attachment, but right now I am busy with something else, so I will ask you tomorrow. I am wondering if Jim can open it.

Makiko

At 15:44 2007/09/06, Reto Ruedy wrote:
> Jim,
>
> I prepared a documentation file (preliminary version attached) that divides the process into a preliminary and another 5 steps - Jay's programs are in step 1 and Robert is working on it (he has trouble compiling one of the C programs; also the order in which stations are combined seems dependent on the release of the data base system); I'm currently working on step 2 and Ken is working backwards from step 6 - hope to get through by tomorrow and combine it into a semi-coherent package.
>
> A week seems a reasonable estimate to clean up what was missed - a total rewrite of Jay's programs however might easily take longer.
>
> Reto
>
> On Thu, 2007-09-06 at 13:41 -0500, James Hansen wrote:
> > Yes, the perception is, unfortunately, what counts now. We will have
> > to release them with the very strong recommendation that anyone
> > wishing to actually use them should wait until they are cleaned up,
> > with the estimate that this will take another week or so (is that the
> > appropriate estimate to give?).
> >
> > Yes, the list should be those stations explicitly removed, since that
> > is perhaps the most subjective thing that we do to the data, other
> > than the procedures for analysis that are described in the papers.
> >
> > The "current" result is one of the results that we want to illustrate.
> > For the other, I was thinking of excluding the correction of two
> > stations and not dropping the stations that are on the list of removed
> > stations (some of them might get removed by the analysis program, but
> > that is o.k., it is using objective criteria). If you do not have
> > this, but have something that includes it, for example also replacing
> > USHCN of "current" with WMO, that should be all right.
> >
> > The objective is too show that our partially subjective choice of
> > stations to remove does not significantly alter the global warming
> > that we obtain. A second objective is to show that the admittedly
> > large problems with African and South American data does not
> > significantly alter the inferred global warming (this second objective
> > just requires Makiko to omit those areas).
> >
> > Jim

>
>
>
> On 9/6/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Jim,
>
> I understand the need to make the programs and input files
> available.
> But to put out an unusable product (though it works on our
> machines,
> based on the directory structures, compilers, etc. of the
> various
> machines) that has to be repeatedly changed may be
> counterproductive. I
> wish I had another week - or at least a weekend where I could
> work
> without interruption.
>
> (1) As far as list of stations we remove is concerned, most
> are removed
> or remain unused automatically because their records are too
> short to
> have sufficient overlap with the dominating stations. Do you
> only want a
> list of those stations that are explicitly removed at the
> beginning of
> the process due to their strange data ?
>
> (2) Corrections: We correct 2 stations (St.Helena and Lihue)
> and use
> USHCN instead of the corresponding GHCN data. The rest is
> dropping parts
> or all of a record (=cleaning). Hence:
>
> "no corrections"="not correcting the 2 stations, not using
> USHCN, no
> cleaning",
>
> "current"="2 corrections+USHCN+cleaning",
>
> "no cleaning"="2 corrections+USHCN".
>
> Are any 2 of these 3 options what you need ?
>
> I guess (3) can be done by Makiko, if not let me know.
>
> Reto
>
>
> On Thu, 2007-09-06 at 10:28 -0500, James Hansen wrote:
> > Reto, Robert,
> >
> > We are getting more and more questions as to why we will not
> release
> > our temperature data analysis programs. We need to make
> these
> > available this week, by the end of the day tomorrow.
> >
> > Can you put these in a place where they are accessible, with
> an
> > address that I will put in an e-mail? This will be as part
> of an
> > e-mail that also provides access to the revised "Peak Oil"

> paper.
> >
> > It probably should include a simple listing of the function of each
> > subroutine. We can note that a simplified version of the programs
> > will be available in the future.
> >
> > Finally we need:
> > (1) a list of the stations that we remove, and
> > (2) line graph of global mean land-ocean temperature index with and
> > without these stations removed (the draft that you gave me has No
> > Corrections, Current Web, No Cleaning -- what do these three
> > categories mean? I believe what we want is two curves, one that uses
> > the data without alterations and one for what we present to the public
> > (3) maps showing the results with and without our changes -- the four
> > maps that you made for 1880-2006 are fine, but the maps need to be
> > made with Makiko's program/color scale etc. Also I would like to add
> > two maps: delete the two maps on the left (which show the effect of St
> > Helena/Lihue) and add the result when South America and Africa are
> > replace with no data, the objective being to see how these continents
> > contribute to the global mean temperature change. Clearly the data in
> > those continents is pretty lousy, but how much difference does that
> > make for the global mean?
> >
> > Jim
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

</x-flowed>

Subject: Re: Program release
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 06 Sep 2007 16:25:42 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: rruedy@giss.nasa.gov, "Ken Lo" <klo@giss.nasa.gov>

Jim, Can you use the attached Word file? Makiko At 16:19 2007/09/06, James Hansen wrote: >Reto's write-up is excellent. I only want to re-write the >introductory couple of paragraphs. How should I do that? This is >not a format that I have worked in -- can/should I copy and put in Word?? Jim > >On 9/6/07, Robert B. Schmunk ><Robert.B.Schmunk@nasa.gov> wrote: > >On Sep 6, 2007, at 15:44, Reto Ruedy wrote: > > > Jay's > > programs are in step 1 and Robert is working on it (he has trouble > > compiling one of the C programs; also the order in which stations are > > combined seems dependent on the release of the data base system) > >The C programs mentioned are actually compiled C "extensions" >which are used by the Python programs. I was able to install >a copy of these extensions on Web2 in the spring two years ago >when we managed to transfer the various GISTEMP CGI scripts >from Web1 to Web2, but unfortunately I do not have any record >of what special hoops I had to jump through in order to do so. > >As for the database system, the Python programs save the >station data in binary files using Berkeley DB. The version >of BDB on the machine Jay and on the machine Web2 is different. > >I have been able to get a Python script which combines station >data records to run on Web2, but there are some differences in >the resulting output files when compared with the files >generated on Jay. I am currently trying to figure out what >might be the cause of that, and whether it might be a result of >the difference in BDB versions. > >rbs > > > > >-- >Robert B. Schmunk, >Robert.B.Schmunk@nasa.gov >NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY >10025 > Attachment Converted: "c:\program files\qualcomm\eudora\attach\Reto.070906.doc"

GISS Temperature Analysis

History

GISS started in the 1970s to use 1-D models to study climate forcings and their potential impact. These studies were continued using the GISS 3-D climate model.
However, comparisons with observed data were not easily possible, because long term temperature records (1880-present) are missing for large parts of the world and estimates for the global trends were not available in the literature.
GISS started to compute such estimates on the basis of the available data using MCDW reports and NOAA near real-time data. GISS established that useful estimates can be obtained for the global temperature changes during the past century with a careful investigation of the margin of error of such estimates.

Fortunately, the labor-intensive effort of collecting reports from various sources and of evaluating and cleaning those reports was taken over by at team of experts at NOAA (GHCN/USHCN).

GISS now concentrates on converting these data to anomalies and combining them into a gridded data set to get time series of large regional and global means.

Sources

Basic data set: GHCN - ftp://ftp.ncdc.noaa.gov/pub/data/ghcn/v2
v2.mean.Z (data file)
v2.temperature.inv.Z (station information file)

For Hohenpeissenberg -
http://members.lycos.nl/ErrenWijlens/co2/t_hohenpeissenberg_200306.txt
complete record for this rural station
(thanks to Hans Erren who reported it to GISS on July 16, 2003)

For US: USHCN - http://cdiac.ornl.gov/ftp/ushcn_monthly
hcn_doe_mean_data.Z
station_inventory

For Antarctica: SCAR -
http://www.antarctica.ac.uk/met/READER/surface/stationpt.html

http://www.antarctica.ac.uk/met/READER/temperature.html

http://www.antarctica.ac.uk/met/READER/aws/awspt.html

SCAR contains some stations that are not part of GHCN - only those data are used
that are marked by SCAR as final

USHCN are a subset of GHCN, but those data were adjusted for various recording
and protocol errors and discontinuities; this set is particularly relevant if
studies of US temperatures are made. These corrections, obviously, contribute
little to the GLOBAL temperature trend (since the data for the remaining 98% of
the world are not as carefully investigated)

Step 0 : Merging of sources (do_comb_step0.sh)

GHCN contains reports from several sources, so there often are multiple records for
the same location. Occasionally, a single record was divided up by NOAA into
several pieces, e.g. if suspicious discontinuities were discovered.

USHCN and SCAR contain single source reports but in different formats/units and with
different or no identification numbers. For USHCN, the table "ushcn.tbl" gives a
translation key, for SCAR we extended the WMO number if it existed or created a new ID if it did not (2 cases). SCAR stations are treated as new sources.

Adding SCAR data to GHCN:
The tables were reformatted and the data rescaled to fit the GHCN format; the new stations were added to the inventory file. The site temperature.html
has not been updated for over a year; we found and corrected a few typos in that file.

Replacing USHCN-unmodified by USHCN-corrected data:
The reports were converted from F to C and reformatted; data marked as being
filled in using interpolation were removed. USHCN-IDs were replaced by the
corresponding GHCN-ID. The latest common 15 years for each station were used
to compare corrected and uncorrected data. The offset obtained in that way was
subtracted from the corrected USHCN reports to match any new incoming GHCN
reports for that station (GHCN reports are updated monthly, in the past, USHCN
data lagged by 2-5 years).

Filling in missing data for Hohenpeissenberg:

This is a version of a GHCN report with missing data filled in, so it is used
to fill the gaps of the corresponding GHCN series.

Result: v2.meanz

Step 1 : Simplifications, elimination of dubious records, 2 adjustments (do_comb_step1.sh)

The various sources at a single location are combined into one record, if possible, using a method similar to the reference station method. The shift
is determined in this case on series of estimated annual means.

Non-overlapping records are viewed as a single record, unless this would result introducing a discontinuity; in the documented case of St.Helena the discontinuity is eliminated by adding 1C to the early part.

Some unphysical looking segments were eliminated after manual inspection of
unusual looking annual mean graphs and comparing them to the corresponding
graphs of all neighboring stations. (As a test, the analysis was done including all these parts - the global mean series was not affected)

After noticing an unusual warming trend in Hawaii, closer investigation showed its origin to be in the Lihue record; it had a discontinuity around
1950 not present in any neighboring station. Based on those data, we added
0.8C to the part before the discontinuity.

Step 2 : Splitting into zonal sections and homogeneization (do_comb_step2.sh)

Since the gridding program was written about 30 years ago for what now would be viewed as tiny machines, the data were divided into 6 zonal sections. We plan to reprogram the gridding and analysis section of our procedure to eliminate this division.

The goal of the homogeneization effort is to avoid any impact (warming or cooling) of the changing environment that some stations experienced by changing the global trend of any non-rural station to match the global trend of their rural neighbors. If no such neighbors exist, the station is completely dropped, if the rural records are shorter, part of the non-rural record is dropped.

Step 3 : Gridding and computation of zonal means (do_comb_step3.sh)

A grid of 8000 grid boxes of equal area is used. Time series are changed to series of anomalies. For each grid box, the stations within that grid box and also any station within 1200km of the center of that box are combined using the reference station method.

A similar method is also used to find a series of anomalies for 80 regions
consisting of 100 boxes from the series for those boxes, and again to find
the series for 6 latitudinal zones from those regional series, and finally
to find the hemispheric and global series from the zonal series.

It should be noted that the base period for any of these anomalies is not necessarily the same for each grid box, region, zone. This is irrelevant when computing maps of trends; however, when used to compute anomalies, we
always have to subtract the base period series from the series of the selected time period to get the proper anomaly map.

Step 4 : Regrid sea surface temperature anomalies

Sources: http://www.hadobs.org HadISST1: 1870-present
ftp.emc.ncep.noaa.gov cmb/sst/oimonth_v2 Reynolds 11/1981-present

For both sources, we compute the anomalies with respect to 1982-1991, use the Hadley data for the period 1880-11/1981 and Reynolds data for 12/1981-present.
These data are replicated on the 8000-box equal-area grid in order to be able to use the same utilities for surface and ocean data. Areas covered by
sea ice are masked out (a fixed mask is used for all times).

Step 5 : Computation of LOTI zonal means

The same method as in step3 is used, except that for a particular grid box
the anomaly or trend is computed twice, first based on surface data, then based on ocean data. Depending on the location of the grid box, one or the other is used with priority given to the surface data, if available.

Subject: Re: Program release
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 07 Sep 2007 12:38:48 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Jim,

Now your seminar is over, let's concentrate on this temperature stuff. It's not clear to me exactly what I should do, but Reto may know. Do you want to talk to us before I start making maps? Or do you want me to go ahead with Reto?

Makiko

> (3) maps showing the results with and without our changes -- the four maps that you made for 1880-2006 are fine, but the maps need to be made with Makiko's program/color scale etc. Also I would like to add two maps: delete the two maps on the left (which show the effect of St Helena/Lihue) and add the result when South America and Africa are replace with no data, the objective being to see how these continents contribute to the global mean temperature change. Clearly the data in those continents is pretty lousy, but how much difference does that make for the global mean?

A second objective is to show that the admittedly large problems with African and South American data does not significantly alter the inferred global warming (this second objective just requires Makiko to omit those areas).

Subject: Re: Program release
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 07 Sep 2007 17:00:15 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, "Ken Lo" <klo@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Jim,

6 maps, linegraph and full list of cleaned stations are at the top of http://www.giss.nasa.gov/~makis/GISS_Temp/.

Makiko

At 13:49 2007/09/07, James Hansen wrote:

> Makiko,
>
> Please work on making nice looking maps with global temperature trends for the periods 1880-recent and 1900-recent, for the three cases "current", ""no cleaning"", and "South America and Africa blank". By ""no cleaning"", what I was hoping for was the same as "current" but with the stations on our "no call" list excluded, which means exclude St Helena, the Hawaii station, and the others that our cleaning catchs. I am not sure if we have exactly that result.
>
> Jim
>
> On 9/7/07, Reto Ruedy <<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov> wrote:
> Robert,
>
> I combined all source codes according to the steps I outlined in my documentation and put it on jay:/gcm/GHCN/GISTEMP_sources . Please take a look at it - I tested most pieces. Maybe you find a better way to organize the thing.
>
> The documentation "gistemp.txt" is not the final version. The whole thing is only about 5 MB.
>
> Reto
>
> On Thu, 2007-09-06 at 22:16 -0400, Robert B. Schmunk wrote:
> > Reto,
> >
> > Earlier I noted:
> >
> > > I have been able to get a Python script which combines station
> > > data records to run on Web2, but there are some differences in
> > > the resulting output files when compared with the files
> > > generated on Jay. I am currently trying to figure out what
> > > might be the cause of that, and whether it might be a result of
> > > the difference in BDB versions.
> >
> > It turns out that the difference is in the version of Python
> > installed on the computer. More specifically, it's the Python
> > hashing function.
> >
> > There are a couple places in comb_records.py where the
> > records.items() command is used to get the separate records
> > from the hash (or what Python calls a "dict") for a station
> > that has multiple records. It is characteristic of a hash/dict

> that the items could be in any order, and it is up to the
> programmer to do his own sorting if it is required that the
> items be processed in a predictable order.
>
> So because the hash function in Python 1.5 and 2.2 differs,
> when comb_records.py examines a station with multiple records
> and decides which records to use, the order in which those
> multiple records are assessed may vary and that can affect
> the output file.
>
> I created a modified version of comb_records.py which
> always works through multiple records for a station in a
> predictable order (0, 1, 2, etc.). When that program was
> run on Jay and on Web2, the resulting output files were the
> same.
>
> A similar hash ordering issue probably applies to the
> comb_pieces.py program.
>
> rbs
>
> --
> Robert B. Schmunk, <mailto:Robert.B.Schmunk@nasa.gov>Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
> 10025
--
Reto Ruedy <<mailto:rruedy@giss.nasa.gov> rruedy@giss.nasa.gov>

Subject: Re: draft e-mail
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 07 Sep 2007 18:57:53 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

At 18:42 2007/09/07, James Hansen wrote:
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Just a couple of typos in the "Temperature Analysis Code" section:

2nd paragraph: replace "5 standard deviations are more" by ".. or more"
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> "Peak Oil" Paper Revised and Temperature Analysis Code
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Content-Type: application/msword; name="temp.doc"
Content-Disposition: attachment; filename="temp.doc"
X-Attachment-Id: f_f6b9vs1d
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email.070907.doc	Content-Type: application/msword Content-Encoding: base64

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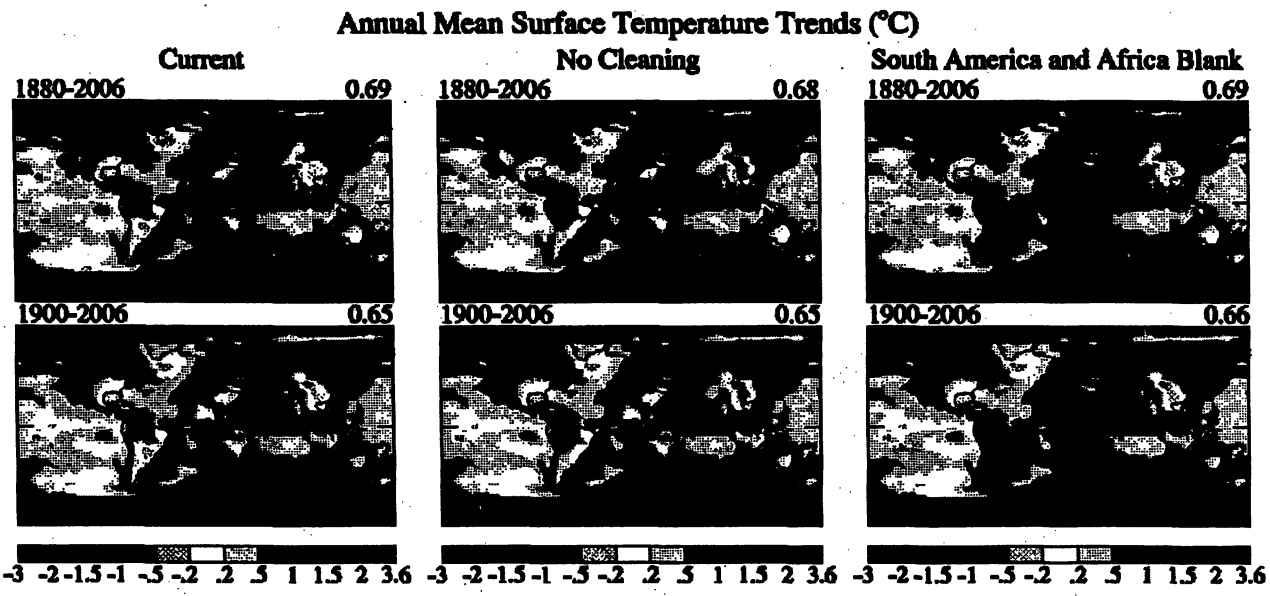

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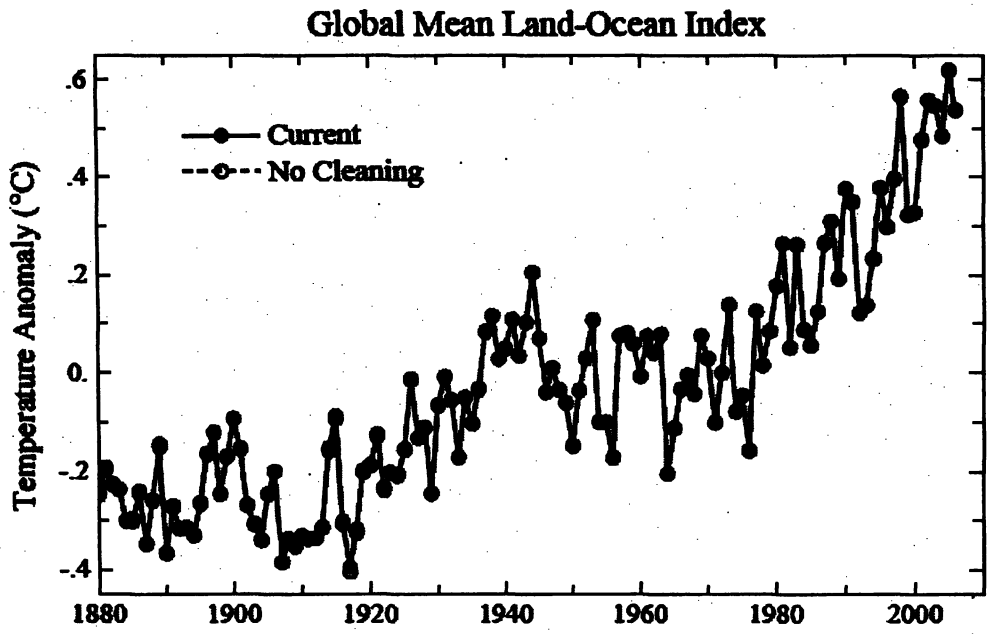

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This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the "history" introduction to the program description.

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Hansen and Lebedeff (Global trends of measured surface air temperature, *J. Geophys. Res.* **92**, 13345, 1987) documented the analysis method, showing that the correlation of temperature change was reasonably strong for stations separated by up to 1200 km, especially at middle and high latitudes. They obtained quantitative estimates of the error in annual and 5-year mean temperature change by sampling at station locations a spatially complete data set of a long run of a global climate model, which was shown to have realistic spatial and temporal variability.

This derived error bar only addressed the error due to incomplete spatial coverage of measurements. As there are other potential sources of error, such as urban warming near meteorological stations, etc., many other methods have been used to verify the approximate magnitude of inferred global warming. These methods include inference of surface temperature change from vertical temperature profiles in the ground (bore holes) at many sites around the world, rate of glacier retreat at many locations, and studies by several groups of the effect of urban and other local human influences on the global temperature record. All of these yield consistent estimates of the approximate magnitude of global warming, which has now increased to about twice the magnitude that we reported in 1981. Still further affirmation of the reality of the warming is its spatial distribution, which shows largest values at locations remote from any local human influence, with a global pattern consistent with that expected for response to global climate forcings (larger in the Northern Hemisphere than the Southern Hemisphere, larger at high latitudes than low latitudes, larger over land than over ocean).

Some improvements in our analysis were made several years ago (*J. Geophys. Res.* **104**, 30997, 1999; **106**, 23947, 2001) including use of satellite-observed night lights to determine which stations in the United States are located in urban and peri-urban areas, the long-term trends of those stations being adjusted to agree with long-term trends of nearby rural stations.

[As you will see in the latter paper we found 1934 and 1998 to be in a statistical tie for warmest U.S. year, 1934 being warmer by an insignificant couple hundredths of a degree. We still find that result. The minor flaw recently found in our data analysis, which affected U.S. temperatures by 0.15C after 2000, did not alter this result. Pundits picking up on this non-story did not get this right, and further they tried to leave the impression that they were talking about global temperature. Ah me.]

You may wonder why we bother to put up with this hassle and the nasty e-mails that it brings. Well, there are at least a couple of good reasons.

First, there is scientific value in having near-real-time global temperature analyses, it is fairly easy to run the analyses as new data comes in each month, and a lot of people tell us that our analysis and presentation is useful to them. There is merit in having more than one group do the analyses because the results differ somewhat. For example, in 2005 we were the only group initially reporting that as being, on global mean, the warmest year in the record. We would not have obtained that result with our method of extrapolating estimates of anomalies out to distances of 1200 km from the nearest station. Later checks with satellite infrared data indicated that our Arctic and Greenland anomalies were, if anything, conservative.

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PeakOilRevised.070907.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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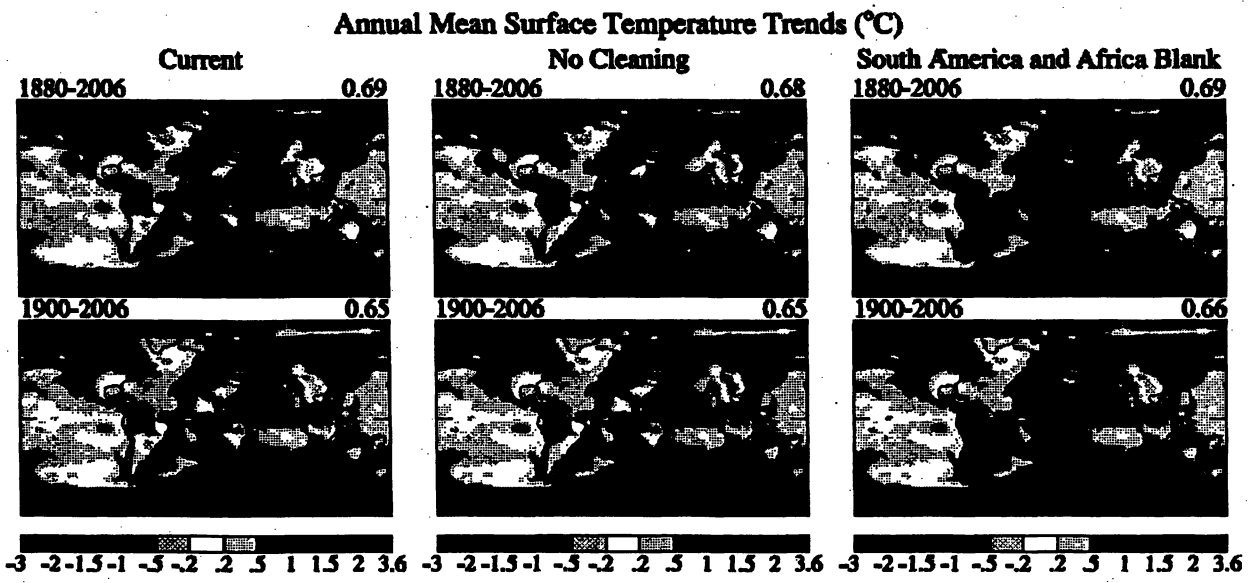

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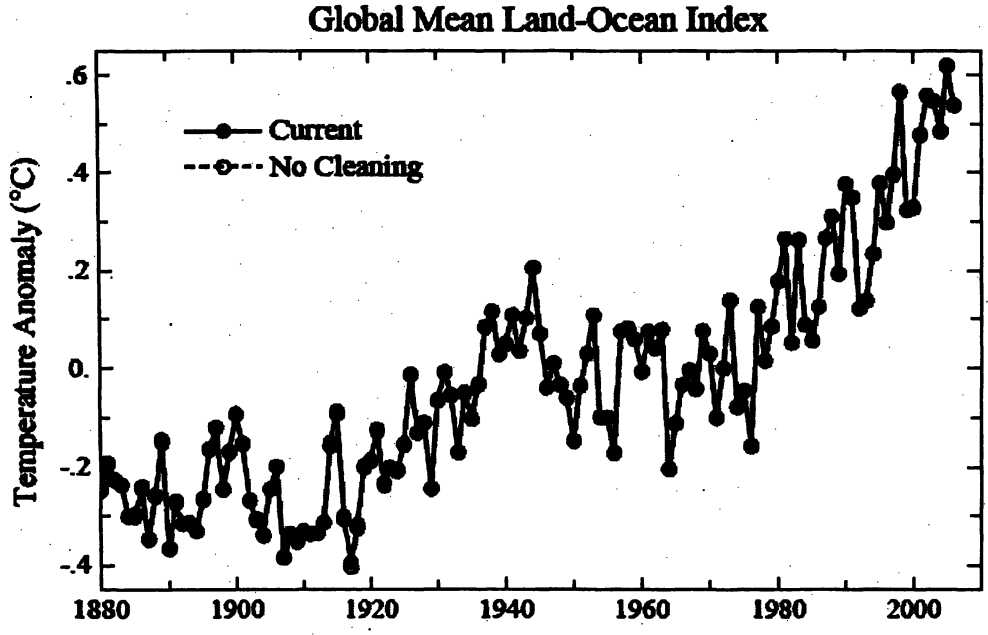

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****

[As you will see in the latter paper we found 1934 and 1998 to be in a statistical tie for warmest U.S. year, 1934 being warmer by an insignificant couple hundredths of a degree. We still find that result. The minor flaw recently found in our data analysis, which affected U.S. temperatures by 0.15C after 2000, did not alter this result. Pundits picking up on this non-story did not get this right, and further they tried to leave the impression that they were talking about global temperature. Ah me.]

You may wonder why we bother to put up with this hassle and the nasty e-mails that it brings. Well, there are at least a couple of good reasons.

First, there is scientific value in having near-real-time global temperature analysis, it is fairly easy to run the program as new data come in each month, and a lot of people tell us that our analysis and presentations are useful to them. There is merit in having more than one group do the analyses because the results differ somewhat. For example, in 2005 we were the only group initially reporting 2005 as being, on global mean, the warmest year in the record. We would not have obtained that result without our method of extrapolating estimates of anomalies out to distances of 1200 km from the nearest station. Later checks with satellite infrared data indicated that our Arctic and Greenland warm anomalies were, if anything, conservative. And the interactions with the NOAA and British groups have been extremely friendly and fruitful and in the spirit of good science, and good science is fun.

Second, the climate change problem is important.

Jim

Subject: Re: draft e-mail
From: Makiko Sato <makis@giss.nasa.gov>
Date: Fri, 07 Sep 2007 20:34:17 -0400
To: James Hansen <jhansen@giss.nasa.gov>, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: Reto Ruedy <rruedy@giss.nasa.gov>

At 20:32 2007/09/07, James Hansen wrote:
> This may be complete (as of 8:26 PM)
>
> At 07:57 PM 9/7/2007, Robert B. Schmunk wrote:
>
> > I have put the archived bundle of software at
> >
> > http://data.giss.nasa.gov/gistemp/sources/
> >
> > The archive includes two "list.of.stations" files from Makiko.
> >
> > rbs
> >
> > On Sep 7, 2007, at 19:41, James Hansen wrote:
> >
> > > Thanks, I also need the location of the programs and list of stations removed (or, better, make the latter part of the former). Jim
> > >
> > > At 07:16 PM 9/7/2007, Robert B. Schmunk wrote:
> > >
> > > > Per my earlier note, the URL for "Peak Oil" is
> > > >
> > > > http://pubs.giss.nasa.gov/abstracts/submitted/Kharecha_Hansen.html
> > > >
> > > > In the second para about GISTEMP, should "McClintock" be "McIntyre"? Note there is also a XX in this para that still needs to be filled in.
> > > >
> > > > rbs
> > > >
> > > > On Sep 7, 2007, at 18:57, James Hansen wrote:
> > > >
> > > > > Here is a complete draft. The part for History is between ********s
> > > > >
> > > > > On 9/7/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> > > > >
> > > > > > Here is a not quite complete draft. Jim
> > > > > >
> > > > > > On 9/7/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > > > > >
> > > > > > > Jim,
> > > > > > >
> > > > > > > Just a couple of typos in the "Temperature Analysis Code" section:

2nd paragraph: replace "5 standard deviations are more" by ".. or more"
and in the beginning of the next sentence "I compared the" by "The".

Reto

On Fri, 2007-09-07 at 17:50 -0400, James Hansen wrote:
> here is draft e-mail. I am still writing the 'history' introduction to
>
> the program listing.
>
> "Peak Oil" Paper Revised and Temperature Analysis Code
>
> To be removed from Jim Hansen's e-mail distribution respond with REMOVE in subject line.
>
> (1) The paper "Implications of 'Peak Oil' for Atmospheric CO2 and Climate", recently revised and resubmitted to Environmental Research
> Letters, is available at XXXXXXXXXXX.
>
> A principal concern of both referees was our use of a pulse-response
> function, fit to the Bern carbon cycle model, as opposed to a detailed
> carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the simplicity and
> transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO2 levels, in which case the strong positive feedbacks
> found in some climate-carbon models are less likely, and in any case
> such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.
>
> We have minimized reference to a "dangerous" atmospheric CO2 level to
> satisfy one of the referees. We retained one reference to our recent
> papers, which are published in peer-reviewed journals and, we believe,
> make a strong case that we are already close to a dangerous CO2 level.
>
> The principal conclusion of this paper is that it is possible to keep
> atmospheric CO2 at a much lower limit than commonly assumed, provided

that coal use is phased out except where the CO 2 is captured and stored. This paper provides some of the rationale for the discussion
in "Old King Coal II".

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document as well as practical
on a short time scale the programs that produce our global temperature
analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over
the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer unique functions Reto would have preferred to have a week or two to
combine these into a simpler more transparent structure, but because
of a recent flood of demands for the programs, they are being made
available as is. People interested in science may want to wait a
week or two for a simplified version.

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the
significance (or lack thereof) of criticisms in the blogosphere. The
one aspect of our procedure where subjectivity could come into play is
the choice of which stations are eliminated from the record. This is
based on identifying the (small fraction of) stations that raise a red
flag (e.g., deviation of 5 standard deviations are more, or a large
temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest
stations; if these displayed similar features the records were retained. We provide here the list of stations eliminated.

Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global
temperature with and without these stations, and Figure 2 shows the
global mean temperature with and without these stations. The effect
is practically imperceptible and clearly insignificant.

Another favorite target of those who would raise doubt about the reality of global warming is the lack of quality data from South America and Africa, a legitimate concern. You will note in our maps of temperature change some blotches in South America and Africa, which are probably due to bad data. Our procedure does not throw out data because it looks unrealistic, as that would be subjective. But what is the global significance of these regions of exceptionally poor data? As shown by Figure 1, omission of South America and Africa has only a tiny effect on the global temperature change. Indeed, where it makes a difference it increases the temperature change by (an entirely insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the "history" introduction to the program description.

<PeakOilRevised.7Sept2007.doc>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

PeakOilRevised.070907.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

'Peak Oil' Paper Revised and Temperature Analysis Code

(1) The paper "Implications of 'Peak Oil' for Atmospheric CO_2 and Climate", recently revised and resubmitted to *Environmental Research Letters*, is available at http://pubs.giss.nasa.gov/abstracts/submitted/Kharecha_Hansen.html

A principal concern of both referees was our use of a pulse-response function, fit to the Bern carbon cycle model, as opposed to a detailed carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the simplicity and transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO_2 levels, in which case the strong positive feedbacks found in some climate-carbon models are less likely, and in any case such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.

We have minimized reference to a "dangerous" atmospheric CO_2 level to satisfy one of the referees. We retained one reference to our recent papers, which are published in peer-reviewed journals and, we believe, make a strong case that we are already close to a dangerous CO_2 level.

The principal conclusion of this paper is that it is possible to keep atmospheric CO_2 at a much lower limit than commonly assumed, provided that coal use is phased out except where the CO_2 is captured and stored, and use of unconventional fossil fuels, if it occurs, is also accompanied by CO_2 capture and storage. This paper provides some of the rationale for the discussion in "Old King Coal II": http://www.columbia.edu/~jeh1/distro_OldKingCoalII_70730.pdf

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document, as well as practical on a short time scale, the programs that produce our global temperature analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer unique functions, Reto would have preferred to have a week or two to combine these into a simpler more transparent structure, but because of a recent flood of demands for the programs, they are being made available as is. People interested in science may want to wait a week or two for a simplified version. The documentation/programs are at: http://data.giss.nasa.gov/gistemp/sources/

An introduction (History) to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the choice of which stations are eliminated from the record. This is based on identifying the (small fraction of) stations that raise a red flag (e.g., deviation of 5 standard deviations or more, or a large temporal discontinuity, as defined in our papers). The records of these stations were compared with records of the nearest neighboring stations; if neighboring stations displayed similar features the records were retained. The documentation lists stations/data eliminated.

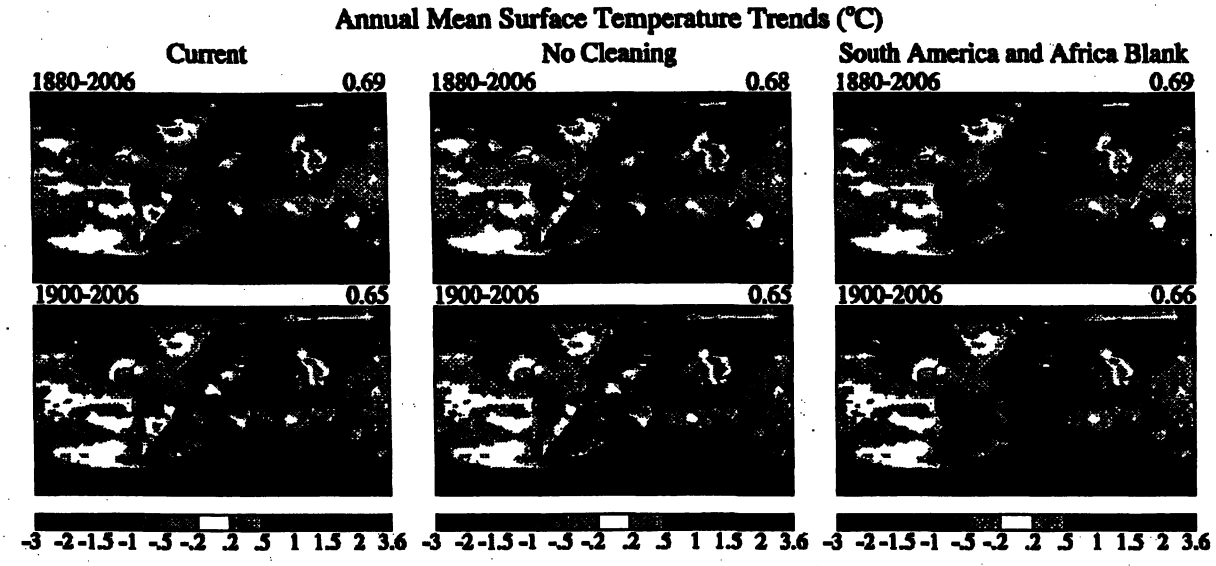
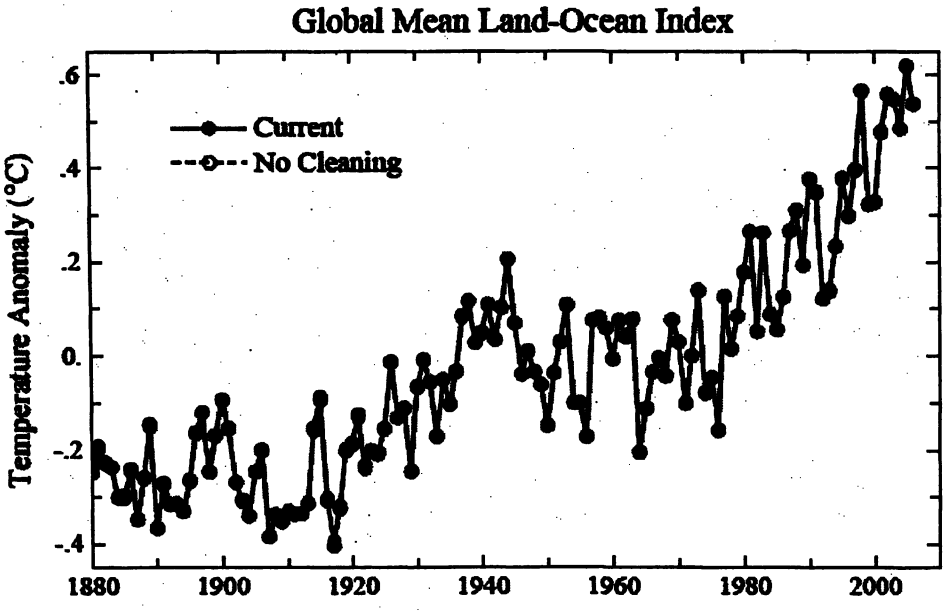


Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global temperature with and without these stations, and Figure 2 shows the global mean temperature with and without these station/data changes. The effect is practically imperceptible and clearly insignificant.



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temperature change. Indeed, the difference that omitting these areas makes is to increase the global temperature change by (an entirely insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the 'history' introduction to the program description.

****

GISS Temperature Analysis

History

The basic GISS temperature analysis scheme was defined in the late 1970s by Jim Hansen when a method of estimating global temperature change was needed for comparison with one-dimensional global climate models. Prior temperature analyses, most notably those of Murray Mitchell, covered only 20-90N latitudes. Our rationale was that the number of Southern Hemisphere stations was sufficient for a meaningful estimate of global temperature change, because temperature anomalies and trends are highly correlated over substantial geographical distances. Our first published results (Hansen et al., Climate impact of increasing atmospheric carbon dioxide, *Science* **213**, 957, 1981) showed that, contrary to impressions from northern latitudes, global cooling after 1940 was small, and there was net global warming of about 0.4C between the 1880s and 1970s.

Hansen and Lebedeff (Global trends of measured surface air temperature, *J. Geophys. Res.* **92**, 13345, 1987) documented the analysis method, showing that the correlation of temperature change was reasonably strong for stations separated by up to 1200 km, especially at middle and high latitudes. They obtained quantitative estimates of the error in annual and 5-year mean temperature change by sampling at station locations a spatially complete data set of a long run of a global climate model, which was shown to have realistic spatial and temporal variability.

This derived error bar only addressed the error due to incomplete spatial coverage of measurements. As there are other potential sources of error, such as urban warming near meteorological stations, etc., many other methods have been used to verify the approximate magnitude of inferred global warming. These methods include inference of surface temperature change from vertical temperature profiles in the ground (bore holes) at many sites around the world, rate of glacier retreat at many locations, and studies by several groups of the effect of urban and other local human influences on the global temperature record. All of these yield consistent estimates of the approximate magnitude of global warming, which has now increased to about twice the magnitude that we reported in 1981. Still further affirmation of the reality of the warming is its spatial distribution, which shows largest values at locations remote from any local human influence, with a global pattern consistent with that expected for response to global climate forcings (larger in the Northern Hemisphere than the Southern Hemisphere, larger at high latitudes than low latitudes, larger over land than over ocean).

Some improvements in our analysis were made several years ago (*J. Geophys. Res.* **104**, 30997, 1999; **106**, 23947, 2001) including use of satellite-observed night lights to determine which stations in the United States are located in urban and peri-urban areas, the long-term trends of those stations being adjusted to agree with long-term trends of nearby rural stations.

****

Subject: Re: draft e-mail
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 20:54:44 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>

I've put the PDF at

http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

I have also continued to "bloggify" copies of these mailings,
including this new one, at

http://jameshansen.blogspot.com/

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: Program release
From: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
Date: Fri, 7 Sep 2007 21:14:19 -0400
To: Reto Ruedy <cdrar@giss.nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

I have also added a link on the GISTEMP homepage to the "sources" directory. The link is in the short paragraph at the end of the Background section.

rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: August temperature
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 09:05:17 -0400
To: "Ken Lo" <cdkkl@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

Hi Ken,

Are you in today and will you update the monthly temperatures? I am wondering because I should decide whether I will do the temperature stuff or finish one more qraph I started yesterday for a book somebody is writing about Jim.
so I will come in sometime this afternoon, so you have a plenty of time if you update today.

Makiko

Subject: Re: SST Anomaly
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 09:16:28 -0400
To: "Ken Lo" <cdkkl@giss.nasa.gov>
CC: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Thank you, Ken. Please take your time and check things carefully. If we make some other mistakes, we will be more in trouble. I'd better finish the graph for Jim's book anyway.

Makiko

On 9/10/07, Ken Lo <cdkkl@giss.nasa.gov> wrote:

> Jim and Makiko,
>
> This week's sst anomaly maps are attached.
>
> I am working on GISTEMP now. It will take a bit longer this month because Reto made some changes last two weeks and we have to do some testing.
>
> Ken

Subject: Re: August temperature
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 09:52:48 -0400
To: rruedy@giss.nasa.gov

Hi Reto,

Please take a lot of time for checking very carefully. Jim rather wants me to finish one technically complicated graph which Lilly made a few years ago. And since that may be the only thing I can do today. (I worked 6 hours and finished one graph but not the second one yesterday.)

See you later,

Makiko

On 9/10/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Hi Makiko,
>
> We'll try to use this month's update to make sure that the sources we put on the web works. So we'll do it slowly and carefully - once the traditional way, then using the programs I put on the web.
>
> That may take a little longer than usual.
>
> Reto
>
> On Mon, 2007-09-10 at 09:05 -0400, Makiko Sato wrote:
>
> > Hi Ken,
> >
> > Are you in today and will you update the monthly temperatures? I am wondering because I should decide whether I will do the temperature stuff or finish one more graph I started yesterday for a book somebody is writing about Jim.
> > so I will come in sometime this afternoon, so you have a plenty of time if you update today.
> >
> > Makiko
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: GISTEMP
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 13:26:07 -0400
To: Ken Lo <cdkkl@giss.nasa.gov>, "Reto A. Ruedy" <cdrar@giss.nasa.gov>, James Hansen <jhansen@giss.nasa.gov>

Thank you, Ken and Reto. I will start updating my web page in one hour or so.

Makiko

At 13:21 2007/09/10, Ken Lo wrote:
> I have updated this month's GISTEMP. Reto and I have checked
> the new procedure against the old. The results are the same.
>
> Ken

Subject: August temperature
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 18:58:58 -0400
To: jhansen@giss.nasa.gov

<x-flowed>
Jim,

http://data.giss.nasa.gov/gistemp/graphs/2007+2005+1998.pdf
I am printing some graphs/maps I made on your printer, so please pick them up.
Almost all Eurasia has been warm this year, and SST not so warm.
Monthly patterns of 2007 and 2005 are somewhat similar, so we may have a warm fall
(not good reasoning?)

Makiko

</x-flowed>

Subject: August station data
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 19:27:27 -0400
To: rruedy@giss.nasa.gov, klo@giss.nasa.gov

Reto, Ken,

I haven't succeeded finding August 2007 data from any station. (Usually Japanese stations come early and most of the time I can find the latest month for the station with data xxxx-2007.) Have the station data for the web site been updated?

Makiko

Subject: Re: August station data
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Tue, 11 Sep 2007 10:42:02 -0400
To: rruedy@giss.nasa.gov

Thank you, Reto. I am glad I noticed before some outsider do. See you later.

Makiko

On 9/11/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Makiko,
>
> Thanks for noticing that - since we changed to using the newest USHCN,
> the output files were moved to a special directory and the culled
> versions were never created. So, except for the homogenized data, the
> station data were still the same as a month ago.
>
> I changed the new script and updated all station data.
>
> Reto
>
> On Mon, 2007-09-10 at 19:27 -0400, Makiko Sato wrote:
>
> > Reto, Ken,
> >
> > I haven't succeeded finding August 2007 data from any
> > station. (Usually Japanese stations come early and most of the time
> > I can find the latest month for the station with data
> > xxxx-2007.) Have the station data for the web site been updated?
> >
> > Makiko
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fwd: statement about warmest years
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 11 Sep 2007 17:22:15 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

<x-flowed>
Jim,

No, it looks 23 of the 26 warmest were since 1980. (19 out of 20 warmest was since 1980.) (http://data.giss.nasa.gov/gistemp/tabledata/GLB.Ts+dSST.txt)

#1	2005	0.62	
#2	1998	0.57	
#3	2002	0.56	
#4	2003	0.55	
#5	2006	0.54	
#6	2004	0.49	
#7	2001	0.48	
#8	1997	0.40	
#9	1995	0.38	(0.381)
#10	1990	0.38	(0.378)
#20	1944	0.21	
#24	1973	0.14	
#26	1977	0.13	

Before 1998, 1997 was the record warm year, the difference between these two are 0.168 degC. So it is correct to say 0.2 degC and 0.3 degF.

Makiko

At 16:29 2007/09/11, James Hansen wrote:

> Makiko, could you please check this against our land-ocean temperature index? Thanks. Jim
>
> ---------- Forwarded message ----------
> From: Eric Chivian <
> <mailto:eric_chivian@hms.harvard.edu>eric_chivian@hms.harvard.edu>
> Date: Sep 11, 2007 3:50 PM
> Subject: statement about warmest years
> To: <mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov
> Cc: <mailto:aaron_bernstein@hms.harvard.edu>aaron_bernstein@hms.harvard.edu
>
> Dear Jim,
> I have a favor to ask. Could you please look over these two sentences from our new Oxford University Press book and say whether they are correct, and if not provide a corrected version?
>
> Twenty-five of the twenty-six warmest years since global temperatures were first accurately recorded in 1856 have occurred since 1980. In 1998, the average global surface temperature set a new record by a wide margin, exceeding that of the previous record year, 1997, by about 0.3 degree °Fahrenheit (0.2 degree °Celsius). This 1998 record was surpassed in 2005.
>
> That would be very much appreciated.
>
> with very best wishes,
> eric

Subject: August temperature
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 10 Sep 2007 18:58:58 -0400
To: jhansen@giss.nasa.gov

<x-flowed>
Jim,

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To: rruedy@giss.nasa.gov, klo@giss.nasa.gov

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> From: Eric Chivian <
> <mailto:eric_chivian@hms.harvard.edu>eric_chivian@hms.harvard.edu>
> Date: Sep 11, 2007 3:50 PM
> Subject: statement about warmest years
> To: <mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov
> Cc: <mailto:aaron_bernstein@hms.harvard.edu>aaron_bernstein@hms.harvard.edu
>
> Dear Jim,
> I have a favor to ask. Could you please look over these two sentences from our new Oxford University Press book and say whether they are correct, and if not provide a corrected version?
>
> Twenty-five of the twenty-six warmest years since global temperatures were first accurately recorded in 1856 have occurred since 1980. In 1998, the average global surface temperature set a new record by a wide margin, exceeding that of the previous record year, 1997, by about 0.3 degree °Fahrenheit (0.2 degree °Celsius). This 1998 record was surpassed in 2005.
>
> That would be very much appreciated.
>
> with very best wishes,
> eric

--
Eric Chivian M.D.
Director
Center for Health and the Global Environment
Harvard Medical School
Landmark Center--2nd Floor East
401 Park Drive
Boston, MA 02215

Tel. 617-384-8536
Fax. 617-384-8585
email <<mailto:eric_chivian@hms.harvard.edu>eric_chivian@hms.harvard.edu>
website < http://chge.med.harvard.edu>

The mission of the Center is to help people understand that our health, and that of our children, depends on the health of the environment, and that we must do everything we can to protect it.

</x-flowed>

Subject: Re: US brightness index
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 12 Sep 2007 18:34:21 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

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"
*** What's New ***

(a) Sept. 10, 2007: The use of the USHCN station records was extended to 2005 from 1999.

(b) Please see <http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf>"A Light On Upstairs?" (Aug. 10), <http://www.columbia.edu/~jeh1/realdeal.16aug20074.pdf>"The Real Deal: Usufruct & the Gorilla" (Aug. 16), and <http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf>""Peak Oil" Paper Revised and Temperature Analysis Code" (Sept. 7). for discussions regarding the changes made on August 7, 2007 for 2000-2006 U.S. mean temperatures. "

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Are my words OK?

Makiko

At 17:26 2007/09/12, you wrote:

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> I looked at the US annual mean series in both cases: they differ by less than .003 C except between 1880 and 1900; in 1900 the difference new-old

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Reto

</x-flowed>

Subject: error bar in land-ocean index graph
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 12 Sep 2007 19:25:54 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

<x-flowed>
I added error bars, the same as in our PNAS paper, to the land-ocean index. If you don't like them, I will remove them. http://data.giss.nasa.gov/gistemp/graphs/

Makiko

</x-flowed>

Subject: US mean data
From: Makiko Sato <makis@giss.nasa.gov>
Date: Wed, 12 Sep 2007 19:55:59 -0400
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov

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Subject: Re: US mean data
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 12 Sep 2007 21:44:29 -0400
To: rruedy@giss.nasa.gov
CC: jhansen@giss.nasa.gov

Reto,

I am glad that Ken Bell could fix your e-mail problem,

I thought about showing both US means; USHCN through 1999 and USHCN through 2005. T(1934) = 1.25 and T(1998) = 1.23 before and T(1934) = T(1998) = 1.24 now. But Jim wonders (and so I do) why using USHCN for 2000-2005 changes the mean temperature before 2000. After we understand why, I will show both data.

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From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 12 Sep 2007 22:23:21 -0400
To: rruedy@giss.nasa.gov
CC: jhansen@giss.nasa.gov

Reto,

Yes, now I remeber that you had told me that USHCN data were cleaned more, dropping many stations which Jim had eliminated. I was just forgetting about it when I talked with Jim on the phone just before I left work. I am sorry.

Now my question is that
when you were using USHCN through 1999 and switching to GHCN from 2000, you matched the GHCN and USHCN means for 1990-1999, right?
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: US mean data
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Thu, 13 Sep 2007 08:05:30 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

Jim,

How do you want to do it? On the GISS temperature web page, below six figures and above "background", do you want to have "What's New" and write "The use of the USHCN statio data was extended to 2005 from 1999" and the US mean and global mean small graphs on the same page, which can be clicked to get enlarged? I will make the graphs today but won't put them on the web page until we talk about it more on the phone today or face-to-face tomorrow. I think you'd better concentrate on the Hawaii paper today, so probably we should do it tomorrow.

Makiko

On 9/13/07, James Hansen <jhansen@giss.nasa.gov> wrote:

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Date: Thu, 13 Sep 2007 12:38:59 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

<x-flowed>
Jim,

I have US and global means for
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Can I compare these two cases? Or should I ask Reto to create
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Comparison of (b) and (c) is totally the USHCN period change, and the difference between (a) and (c) are due to additions of some station data and NOAA modifications which may affect very little to the annual means through 2006.

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</x-flowed>

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From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 13 Sep 2007 15:52:14 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov

<x-flowed>
Jim,

I made comparisons of the old data and the new data and put them at the top of http://www.giss.nasa.gov/~makis/GISS_Temp/ where others can't see.

Reto made a good point. He says I should not use the words "USHCN through 1999" and "USHCN through 2005" but "USHCN 2000 version" and "USHCN current version". He is right because the newer version not just go through 2005 but also they cleaned data for 1880-1999. But do you think it is clear if I write "2000 version" and "current version"? Maybe I should add a sentence describing "2000 version" is through 1999 and the current version is through 2005? How do you want it?

I can wait to put this on the web (for the public) tomorrow.

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> Date: Thu, 13 Sep 2007 12:38:59 -0400
> To: "James Hansen" <jhansen@giss.nasa.gov>
> From: Makiko Sato <makis@giss.nasa.gov>
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> > On 9/12/07, Reto Ruedy < <mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov >
wrote:
> > > Makiko,
> > >
> > > Fortunately, Ken Bell was able to fix my email.
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> > > > with the new data set, Reto? Now I see 1934 = 1.24 and 1998 = 1.24,
tie!
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> > > > What should I do? Switch to this data on
> > > > <http://data.giss.nasa.gov/gistemp/graphs/>http://data.giss.nasa.gov
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> > > > data (with USHCN through 1999)? Since I wrote on the top of the
> > > > page, we extended our use of USHCN to 2005, I'd better switch to new
> > > > one, but then again these crazy people may say, now we have 1934 and
> > > > 1998 in tie. Which is true? Why did we change? etc, etc.
> > > >
> > > > Makiko
> > >
> > --
> Reto Ruedy <<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov>
>

</x-flowed>

Subject: Re: Re: US mean data
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 13 Sep 2007 16:05:39 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

<x-flowed>
OK, I will make changes to both graphs and tables.

Makiko

At 15:59 2007/09/13, you wrote:
> See suggestion below:
>
> On 9/13/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
> Jim,
>
> I made comparisons of the old data and the new data and put them at
> the top of <http://www.giss.nasa.gov/~makis/GISS Temp/>http://www.giss.nasa.gov
> /~makis/GISS Temp/ where others can't see.
>
> Reto made a good point. He says I should not use the words "USHCN
> through 1999" and "USHCN through 2005" but "USHCN 2000 version" and
> "USHCN current version". He is right because the newer version not
> just go through 2005 but also they cleaned data for 1880-1999. But
> do you think it is clear if I write "2000 version" and "current
> version"? Maybe I should add a sentence describing "2000 version" is
> through 1999 and the current version is through 2005? How do you want it?
>
>
> How about:
> USHCN 2000 Version (data through 1999)
> USHCN Current Version (data through 2005)
>
>
> I can wait to put this on the web (for the public) tomorrow.
>
>
>
> Makiko
>
>
> >Date: Thu, 13 Sep 2007 12:38:59 -0400
> >To: "James Hansen" <<mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov>
> >From: Makiko Sato < <mailto:makis@giss.nasa.gov>makis@giss.nasa.gov>
> >Subject: Re: US mean data
> >Cc: <mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov
> >
> >Jim,
> >
> >I have US and global means for
> > (a) USHCN through 1999, with all data through July 2007
> >and
> > (b) USHCN through 2005, with all data through August 2007.
> >Can I compare these two cases? Or should I ask Reto to create
> > (c) USHCN through 1999 and with all data through August 2007,
> >if he hasn't made this yet?
> >
> >Comparison of (b) and (c) is totally the USHCN period change, and
> >the difference between (a) and (c) are due to additions of some
> >station data and NOAA modifications which may affect very little to
> >the annual means through 2006.

>
>Makiko
>
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> At 05:25 2007/09/13, James Hansen wrote:
>>I believe that the statement that the USHCN data were updated with
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>> when you were using USHCN through 1999 and switching to GHCN from
>>2000, you matched the GHCN and USHCN means for 1990-1999, right?
>> now when you use USHCN through 2005 and use GHCN for 2006 and
>>2007, do you match the GHCN and USHCN means for 1996-2005?
>>It is getting late, so I hope you go home soon and I will ask you tomorrow.
>>Good night,
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>> > many stations - I mentioned that all the USHCN data we discarded were no
>> > longer there or were changed to look perfectly normal; also Steve's
>> > substantial Detroit Lakes changes were made sometime between 1999 and
>> > this year.
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>> > So it was much more than just adding the 6 extra years.
>> >
>> > Reto
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>> > On Wed, 2007-09-12 at 21:44 -0400, Makiko Sato wrote:
>> > > Reto,
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>> > > I am glad that Ken Bell could fix your e-mail problem,
>> > >
>> > >
>> > > I thought about showing both US means; USHCN through 1999 and USHCN
>> > > through 2005. T(1934) = 1.25 and T(1998) = 1.23 before and T(1934) =
>> > > T(1998) = 1.24 now. But Jim wonders (and so I do) why using USHCN
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<mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov>
>> >

</x-flowed>

Subject: Re: Re: US mean data
From: Makiko Sato <makis@giss.nasa.gov>
Date: Thu, 13 Sep 2007 16:40:20 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

I thought "USHCN 2000 Version (data through 1999)
USHCN Current Version (data through 2005)" may not be enough, so I added some sentences in the tables

Global Temperature Anomaly (C)
(Land-Ocean Index)

Year	USHCN Versions 2000 (data through 1999)	Current (data through 2005)	Note: Current version not only has data extended to 2005 but also data for 1880-1999 have been cleaned by NOAA.
1880	-.25	-.25	
1881	-.20	-.20	

on http://www.giss.nasa.gov/~makis/GISS_Temp/GLB_USHCN.2005vs1999.txt

and

U.S. Temperature Anomaly (C)

Year	USHCN Versions 2000 (data through 1999)	Current (data through 2005)	Note: Current version not only has data extended to 2005 but also data for 1880-1999 have been cleaned by NOAA.
1880	-.26	-.24	
1881	.29	.29	

on http://www.giss.nasa.gov/~makis/GISS_Temp/US_USHCN.2005vs1999.txt.

Do you think it is not necessary, or do you have better words?

Makiko

At 15:59 2007/09/13, James Hansen wrote:

> See suggestion below:
>
> On 9/13/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
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> I made comparisons of the old data and the new data and put them at the top of <http://www.giss.nasa.gov/~makis/GISS_Temp/>http://www.giss.nasa.gov/~makis/GISS_Temp/ where others can't see.
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through 1999 and the current version is through 2005? How do you want it?

How about:
USHCN 2000 Version (data through 1999)
USHCN Current Version (data through 2005)

I can wait to put this on the web (for the public) tomorrow.

Makiko

>Date: Thu, 13 Sep 2007 12:38:59 -0400
>To: "James Hansen" <<mailto:jhansen@giss.nasa.gov>jhansen@giss.nasa.gov>
>From: Makiko Sato < <mailto:makis@giss.nasa.gov>makis@giss.nasa.gov>
>Subject: Re: US mean data
>Cc: <mailto:rruedy@giss.nasa.gov>rruedy@giss.nasa.gov
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>> > Reto Ruedy <<mailto: rruedy@giss.nasa.gov>
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>> >

Subject: "graphs" page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 15 Sep 2007 05:35:47 -0400
To: "Reto Ruedy" <rruedy@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Reto, Robert,

Jim and I worked yesterday evening on "What's New" on the graphs page. If there are some corrections/suggestions, please let me know. It is pointing to a "Updates to Analysis" section on temperature home page which doesn't exist until Jim gets back next Wed. or Thurs. , but he said it is OK.

Makiko

Subject: Re: "graphs" page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 15 Sep 2007 13:23:58 -0400
To: rruedy@giss.nasa.gov
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, jhansen@giss.nasa.gov

On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

> Jim, Makiko,
>
> Since the changes mainly affect this page and the station data page,
> this is the proper place to put this section. We might want to add a
> link to it on the station data page.

Yes, we were going to keep these in here.

> On the station data page, we might also want to include the caveat, that
> only the raw GHCN data are suitable for local studies; the other stages
> are only useful to compute regional anomalies and trends for regions
> larger than 300,000 square miles.
>
> It might be good to add in the "what's new" section to a) the
> corresponding graph as in c).

We thought about it, but the difference in (a) and (c) are, for (c) there is no write-ups, and for (a) if you clcik, you can see graphs right away, so we just mentioned they show graphs and maps.

> The section after "what's new" might profit from being titled "How does
> 2007 compare to the 2 hottest years?"

Yes, it is a good idea, so I will add it Monday.

Thank you,
Makiko

> Reto
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> > Makiko

Subject: Re: "graphs" page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 15 Sep 2007 13:49:08 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Jim,

I was talking about

*** What's New ***
(c) Sept. 10, 2007: We switched to the current version of USHCN data set which includes data through 2005. The effect of this change is shown by the following graphs and tables. (See "Updates to Analysis" section on GISS Temperature page for more details.)

large GIF, PDF

Tables of Comparisons Global, US

(b) Sept. 7, 2007: GISS temperature analysis computer programs and data sets were made available. See ""Peak Oil" Paper Revised and Temperature Analysis Code" for discussions including graphs and maps showing effects of data cleaning.

(a) Aug. 7, 2007: Changes were made to correct a discontinuity in records of U.S. stations included in both USHCN and GHCN. See "A Light On Upstairs?" (Aug. 10) and "The Real Deal: Usufruct & the Gorilla" (Aug. 16), which include graphs and maps, for discussions of the impact of the changes.

Makiko

On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> Not quite sure what locations are being referred to, but we need to have all key info on the first page of GISTEMP. What I am hoping is that Rob can make a clever way of having everything important there in a small enough space, e.g., by starting out with the first few lines of paragraph of a section that is completed in an attachment. Thus the main page will direct users to the important results, with an indication of what they include.
>
> I can see why the public has been confused as we presently offer practically no identifiable explanation of recent changes.
>
> I think that it is important to put this stuff up soon. It does not need to be the final format and the list of changes does not have to be complete. But try to avoid putting up something that is later embarrassing.
>
> Jim
>
> On 9/15/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> > On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > > Jim, Makiko,
> > >
> > > Since the changes mainly affect this page and the station data page, this is the proper place to put this section. We might want to add a link to it on the station data page.

Yes, we were going to keep these in here.

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> >
> > Makiko

Subject: Re: Temp Page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sat, 15 Sep 2007 14:53:07 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert Schmunk" <rschmunk@giss.nasa.gov>

Reto,

It means that Robert will put them on the GISS temperature front page
and you will check if that is the way Jim wants?

Makiko

On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> With suggested editing below, I believe that this should allow a complete version of the new front page to GISTEMP. I think that you should go ahead and replace it without waiting for me to get back from Denmark. Jim
>
> On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > In the description of step2 (homogeneization) "urban" should be replaced by "urban and peri-urban" or "non-rural" or we may add a sentence to indicate that "small-town" stations are adjusted the same way as urban stations. Although it is mentioned at the end of the previous section, it should probably be repeated here to avoid accusations of inconsistency.
>
> let's use: "urban and peri-urban (i.e., other than rural)"
> that makes an unambiguous definition of our categories
> > April 2006 modification:
> > Looking at maps based on ocean data alone, we noticed that the HadISST data (1880-1981) extended to regions containing sea ice, whereas the NOAA data (1982-present) did not. In order to get a more consistent time series, the HadISST part was restricted to the same ice-free regions as the NOAA data. Since the temperature of water containing ice is always near the freezing point, including data from such regions tends to artificially dampen any heating or cooling trend.
>
> April 2006 modification: HadISST ocean temperatures are now used only for regions that are identified as ice-free in both the NOAA and HadISST records. This change effects a small number of gridboxes in which HadISST has sea ice while NOAA has open water. The prior approach damped temperature change at these gridboxes because of specification of a fixed temperature in sea ice regions. The new approach still yields a conservative estimate of surface air temperature change, as surface air temperature usually changes markedly when sea ice is replaced by open water or vice versa. Because of the small area of these gridboxes the effect on global temperature change was negligible.
> > Reto
> >
> > On Fri, 2007-09-14 at 19:49 -0400, James Hansen wrote:
> > > Here is new text for the Web. Some inserts and corrections are needed. The change made in April 2006 in unintelligible. As
> indicated,
> > > it needs to include links to several graphs/maps made by Makiko. Some parts of this, such as the Background probably need to be via link --
> but
> > > perhaps these sections should start out with the first few lines and

then

> .... to a link for the whole section?? All of the items in the list of changes to the analysis should be included, but perhaps just the first line
>
> or so then... to a link??
>
> Jim
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Temp Page
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Sun, 16 Sep 2007 07:45:28 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "James Hansen" <jhansen@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

On 9/16/07, Robert B. Schmunk <Robert.B.Schmunk@nasa.gov> wrote:

> A preliminary re-working of the GISTEMP homepage is at
>
> http://data.giss.nasa.gov/gistemp/index_new.html
>
> Although very long, it could go up as-is in place of the current GISTEMP homepage except that the links to the Columbia webpage stuff are not there yet (i.e., in the second para of the Aug 2007 update comments).
>
> I am very concerned about linking directly to the PDFs on the Columbia webpage, whether here or on the graphs page as Makiko has already done, because it is transparent to the user that the PDFs are located on Jim's personal webpage. All they know is that they click on a link on a NASA webpage and they get a PDF. Hence the inattentive user (which would be most of them) would think the PDF is a NASA document.
>
> So on Sunday I will try to make a pass through the PDFs and extract out the material which can be posted on a NASA webpage. I would assume this would mostly mean toning down or eliminating language re: skeptics and denialists.
>
> Also, Makiko, I cleaned up the HTML of the "what's new" you put at the start of the graphs webpage.

Thank you for cleaning.

Is the "(a)", "(b)",

> "(c)" notation necessary? I left it there, but can't see that it needs to be there.

It's only my habbit to number (order) things. I thought if I put in order of (c), (b), (9), people will know the bottom one came first because they may not look at dates I put. But you are rigth, I think Americans don't like graphs or numbers much, so please remove them.

Makiko

> rbs
>
> On Sep 15, 2007, at 14:53, Makiko Sato wrote:
>
> > Reto,
> >
> > It means that Robert will put them on the GISS temperature front page and you will check if that is the way Jim wants?

Makiko

On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> With suggested editing below, I believe that this should allow a complete
> version of the new front page to GISTEMP. I think that you should go ahead
> and replace it without waiting for me to get back from Denmark. Jim
>
> On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > In the description of step2 (homogeneization) "urban" should be replaced
> > by "urban and peri-urban" or "non-rural" or we may add a sentence to
> > indicate that "small-town" stations are adjusted the same way as urban
> > stations. Although it is mentioned at the end of the previous section,
> > it should probably be repeated here to avoid accusations of
> > inconsistency.
>
> let's use: "urban and peri-urban (i.e., other than rural)"
> that makes an unambiguous definition of our categories
> > April 2006 modification;
> > Looking at maps based on ocean data alone, we noticed that the HadISST
> > data (1880-1981) extended to regions containing sea ice, whereas the
> > NOAA data (1982-present) did not. In order to get a more consistent time
> > series, the HadISST part was restricted to the same ice-free regions as
> > the NOAA data. Since the temperature of water containing ice is always
> > near the freezing point, including data from such regions tends to
> > artificially dampen any heating or cooling trend.
> April 2006 modification: HadISST ocean temperatures are now used only for
> regions that are identified as ice-free in both the NOAA and HadISST
> records. This change effects a small number of gridboxes in which HadISST
> has sea ice while NOAA has open water. The prior approach damped
> temperature change at these gridboxes because of specification of a fixed
> temperature in sea ice regions. The new approach still yields a
> conservative estimate of surface air temperature change, as surface air
> temperature usually changes markedly when sea ice is replaced by open water
> or vice versa. Because of the small area of these gridboxes the effect on
> global temperature change was negligible.
> > Reto
> >
> > On Fri, 2007-09-14 at 19:49 -0400, James Hansen wrote:
> > > Here is new text for the Web. Some inserts and corrections are
> > > needed. The change made in April 2006 in unintelligible. As
> indicated,
> > > it needs to include links to several graphs/maps made by
> > > Makiko. Some

> > parts of this, such as the Background probably need to be via link --
> but
> > perhaps these sections should start out with the first few lines and
> then
> > .... to a link for the whole section?? All of the items in the list of
> > changes to the analysis should be included, but perhaps just the first
> line
> > or so then... to a link??
> >
> > Jim
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: two things from Reto
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 17 Sep 2007 12:40:44 -0400
To: jhansen@giss.nasa.gov

<x-flowed>
Jim,

I don't know you can read e-mail, but Reto came to see me about two things.
(1) McIntyre's new nasty e-mail you must have received. Reto is asking if he can change the words.
(2) something about supercomputer use. First Gavin told Reto not to bother you, but none of Gavin, Drew, Ron, Tony are helping Reto, and the deadline was last week. I asked Reto to send you the original letter because I don't know what they really need.

Makiko

</x-flowed>

Subject: Re: "graphs" page
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 17 Sep 2007 14:12:59 -0400
To: rruedy@giss.nasa.gov
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, jhansen@giss.nasa.gov

Reto,

> It might be good to add in the "what's new" section to a) the corresponding graph as in c).

Since there were discussions written for Aug. 7 (I removed (a), (b) and (c) following to Robert's suggestion), I thought it is not necessary to repeat graphs and maps here, but at least I made them available by clicking on "graphs" and "maps".

> The section after "what's new" might profit from being titled "How does 2007 compare to the 2 hottest years?"

I added "

Comparison of 2007 Temperature to the Two Warmest Years" above the graph/maps.

Makiko

Subject: Fwd: two things from Reto
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 17 Sep 2007 17:49:39 -0400
To: jhansen@giss.nasa.gov

<x-flowed>

> Date: Mon, 17 Sep 2007 12:40:44 -0400
> To: jhansen@giss.nasa.gov
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: two things from Reto
>
> Jim,
>
> I don't know you can read e-mail, but Reto came to see me about two things.
> (1) McIntyre's new nasty e-mail you must have received. Reto is asking if he can change the words.
> (2) something about supercomputer use. First Gavin told Reto not to bother you, but none of Gavin, Drew, Ron, Tony are helping Reto, and the deadline was last week. I asked Reto to send you the original letter because I don't know what they really need.
>
> Makiko

</x-flowed>

Subject: Fwd: two things from Reto
From: Makiko Sato <makis@giss.nasa.gov>
Date: Mon, 17 Sep 2007 17:52:51 -0400
To: jhansen@giss.nasa.gov

<x-flowed>
Sorry, I resent one just now before I added anything, by mistake.

Makiko

> Date: Mon, 17 Sep 2007 12:40:44 -0400
> To: jhansen@giss.nasa.gov
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: two things from Reto
>
> Jim,
>
> I don't know you can read e-mail, but Reto came to see me about two things.
> (1) McIntyre's new nasty e-mail you must have received. Reto is asking if he can change the words.

I suggested Reto to send Larry an e-mail and ask him what we should do. So Reto did, but Larry told him to find out who at Goddard handle these, I think.

> (2) something about supercomputer use. First Gavin told Reto not to bother you, but none of Gavin, Drew, Ron, Tony are helping Reto, and the deadline was last week. I asked Reto to send you the original letter because I don't know what they really need.

Ron is going to make a poster, and he needs some of the figures I made, so I told him to use anything on my web page freely.

> Makiko

</x-flowed>

Subject: Re: Regarding the criticisms of McIntyre et al
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Mon, 17 Sep 2007 22:19:57 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

Jim,

Who is
Seems a graduate of (gives a donation to was working at in 2003, and writes a lot to many.

On 9/17/07, James Hansen <jhansen@giss.nasa.gov> wrote:

> You make some good points. I think of my response as a blunt statement of the truth, but others can view it as editorializing. It is 3 AM so I just note that we did thank Mc He has tried to mislead in several ways. We only make changes that make scientific sense, and we should not stop doing that. We have now listed those on the first page of the temperature web page.
>
> Regarding the question of editorializing...I did a lot of soul searching before noting in a talk two years ago that the global warming story was being distorted by special interests ..my Keeling talk at AGU ...most people now believe that this was a good thing to do...if we just report the science and do not make note of misinformation, it is not clear that the message gets out, and we are running out of time.
>
> Jim Hansen
>
> On 9/18/07, @sbsoft.com> wrote:
> > Dear Sir:
> >
> > I don't understand your recent approach in dealing with the recent criticisms of Steve McIntyre and friends.
> >
> > As you recently noted (and McIntyre agrees), none of these criticisms have a
> > material effect on global temperature.

The credibility of GISS (and other organizations aggregating temperature data) DOES have a material impact on any analysis of global temperature.

If McIntyre shows that you have an agenda, then your data (and the conclusions supported by your data) are weakened.

By making undocumented changes to your methodology (which McIntyre subsequently dissects on his blog) you provide ammunition to those who insist that you have agenda, and that your agenda is tainting your data.

Why not adopt an ultraconservative approach in all of the changes that you make? Why not:

1. avoid making changes except in the case of outright errors
2. publicly document all changes at the time they occur
3. graciously thank McIntyre et all for any errors they bring to your attention
4. avoid making editorial statements, and let the data speak for itself.

It makes no difference whether 1934 or 1998 was warmer in the United States.

But your recent statements and changes have created the impression that GISS cares about this issue, and is willing to change its methodology accordingly.

It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: removing "Upstairs" & "Gorilla" from GISS T pages?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 18 Sep 2007 15:39:00 -0400
To: jhansen@giss.nasa.gov
CC: rruedy@giss.nasa.gov, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>

<x-flowed>
Jim,

I have a feeling that many people don't like your "A Light On Upstairs?" and "Usefruct & the Gorilla". They are more your opinions than to show the effects of the changes (science). So, I thought we'd better have links only to graphs and maps I created for these write-ups, from GISS temperature first page and also from the Graphs section. But on the other hand, I don't like to keep changing things now (this way and that way listening to others opinions). What do you think?

Makiko

</x-flowed>

Subject: Re: web page
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 18 Sep 2007 18:06:24 -0400
To: @gmail.com>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

What data comparison? The comparison due to the newest change, i.e. USHCN from 2000 to current version, is still there. I wrote "Tables: Global, US" in a separate line below the graphs, but now Robert changed to "Also see tables of comparisons for <http://data.giss.nasa.gov/gistemp/graphs/GLB_USHCN.2005vs1999.txt>globe and <http://data.giss.nasa.gov/gistemp/graphs/US_USHCN.2005vs1999.txt>US-only." as an additional sentence, so you may have not noticed it.

Otherwise, I don't remember the data comparison. I can make such things for USHCN/GHCN problem fixing.

Makiko

At 17:52 2007/09/18, wrote:
> At one point on the web page I note that it says a data comparison is available "here", but it is not avialable. Jim

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 18 Sep 2007 18:26:22 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, James Hansen <jhansen@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

Jim,

Shall I remove the links to these and add a set of graphs and two sets of maps directly on this page? http://data.giss.nasa.gov/gistemp/graphs

Makiko

At 18:22 2007/09/18, Robert B. Schmunk wrote:

> Makiko has a couple on the Graphs page.
>
> On Sep 18, 2007, at 18:16, James Hansen wrote:
>
> > If there are any links to them other than the one where it is described as
> > to my personal Columbia web page, the additional ones should be removed.
> >
> > On 9/18/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> >
> > > Jim,
> > >
> > > I have a feeling that many people don't like your "A Light On Upstairs?" and "Usefruct & the Gorilla". They are more your opinions than to show the effects of the changes (science). So, I thought we'd better have links only to graphs and maps I created for these write-ups, from GISS temperature first page and also from the Graphs section. But on the other hand, I don't like to keep changing things now (this way and that way listening to others opinions). What do you
> > > think?
> > >
> > > Makiko
>
> --
> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 18 Sep 2007 18:49:38 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov

If I add too many graphs and maps, the original meaning of this page will be lost. So I removed the CU links (not the one talking about the source code release) but added links to graphs and maps (not show them on this page) except the most recent changes.

Makiko

At 18:43 2007/09/18, James Hansen wrote:
o.k.

On 9/19/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
Jim,

Shall I remove the links to these and add a set of graphs and two sets of maps directly on this page? <http://data.giss.nasa.gov/gistemp/graphs>http://data.giss.nasa.gov/gistemp/graphs

Makiko

At 18:22 2007/09/18, Robert B. Schmunk wrote:

>Makiko has a couple on the Graphs page.
>
>
>On Sep 18, 2007, at 18:16, James Hansen wrote:
>
>>If there are any links to them other than the one where it is
>>described as
>>to my personal Columbia web page, the additional ones should be
>>removed.
>>
>>On 9/18/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
>>>
>>>Jim,
>>>
>>>I have a feeling that many people don't like your "A Light On
>>>Upstairs?" and "Usefruct & the Gorilla". They are more your opinions
>>>than to show the effects of the changes (science). So, I thought
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>>>think?
>>>
>>>Makiko
>>>
>
>--
>Robert B. Schmunk, <mailto:Robert.B.Schmunk@nasa.gov>Robert.B.Schmunk@nasa.gov
>NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
>10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: Makiko Sato <makis@giss.nasa.gov>
Date: Tue, 18 Sep 2007 19:05:31 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "James Hansen" <jhansen@giss.nasa.gov>, rruedy@giss.nasa.gov

Do we talk about the release of the temperature analysis code (which was of most interest to those annoying ones) clearly in the first page http://data.giss.nasa.gov/gistemp/? I couldn't find it easily, and that's why I kept the peak oil stuff in.

Makiko

How can I rotate the maps? http://data.giss.nasa.gov/gistemp/graphs/email.070907.maps.pdf, http://data.giss.nasa.gov/gistemp/graphs/UStop4.pdf and http://data.giss.nasa.gov/gistemp/graphs/UStop4.pdf. Right now people should rotate their necks.

At 18:59 2007/09/18, Robert B. Schmunk wrote:

> Since the other CU webpage links have been removed from the Graphs page, should the link to the "Peak Oil Paper Revised and Temperature Analysis Code" still be there?
>
> rbs
>
> On Sep 18, 2007, at 18:49, Makiko Sato wrote:
>
> > If I add too many graphs and maps, the original meaning of this page will be lost. So I removed the CU links (not the one talking about the source code release) but added links to graphs and maps (not show them on this page) except the most recent changes.
> >
> > Makiko
> >
> > At 18:43 2007/09/18, James Hansen wrote:
> > > o.k.
> > >
> > > On 9/19/07, Makiko Sato <<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
> > > Jim,
> > >
> > > Shall I remove the links to these and add a set of graphs and two sets of maps directly on this page? <http://data.giss.nasa.gov/gistemp/graphs>http://data.giss.nasa.gov/gistemp/graphs
> > >
> > > Makiko
> > >
> > > At 18:22 2007/09/18, Robert B. Schmunk wrote:
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> > > >
> > > >
> > > >On Sep 18, 2007, at 18:16, James Hansen wrote:
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> > > >>If there are any links to them other than the one where it is

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>>to my personal Columbia web page, the additional ones should be
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<<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov> wrote:
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>>>Jim,
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>>>than to show the effects of the changes (science). So, I thought
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>>>write-ups, from GISS temperature first page and also from the
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>>>section. But on the other hand, I don't like to keep changing
things
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>Robert B. Schmunk,
<mailto:Robert.B.Schmunk@nasa.gov>Robert.B.Schmunk@nasa.gov
>NASA Goddard Institute for Space Studies, 2880 Broadway, New
York, NY
>10025

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025

From: Makiko Sato [makis@giss.nasa.gov]
Sent: Monday, October 01, 2007 12:42 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]; Hansen, James E. (GISS-6110)
Cc: Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]
Subject: Re: Preliminary examination of HL87 bias method as applied to individual station records

Reto,

Jim,

Do you want me to make some graphs to show that reordering makes only negligible changes, and put them on our website? If so, what kind of graph do you want? We don't have to switch to new analysis, but only to show the insignificance.

Makiko

At 12:16 2007/10/01, Reto Ruedy wrote:
>Hi Jim,
>
>I don't know how much time you want us to spend in response to people
>like I spent last weekend redoing our analysis with the
>alternate ordering of stations (starting always with the longest). The
>major difficulty was that the reordering changed the stationID of many
>combinations (since we use the ID of the reference station), hence I
>had to manually change the IDs in our list of bad records to be
>consistent with the new choice.
>
>Needless to say, the effect was negligible (as opposed to the
>application in the main program, here we don't discard any data, but
>simply end up with multiple records at the same location, if the
>overlap is too short).
>
>The largest difference in the monthly global means was .007C, and the
>trend actually increased insignificantly (the 1921-2006 change
>increased by .01C). Over most of Russia, the change increased the trend.
>
>Nevertheless, presented his preliminary result on Steve's
>web site under the title "Russian Bias" with "insights" like" (in () my
>comments)
>
>"What was clear since we first unraveled the process (bias method) was
>that is was destined to corrupt the combined station data and, as it's
>(sic) name implies, add a bias to the combined data."
>
>Then he goes on to average all the biases for the Russian stations,
>noting that they are mostly negative with a minimum of -.07C in 1940

>til
>1991 and basically 0 afterwards. (Steve adds to this the one line
>comment: It's funny that the errors we've identified tend to increase
>trends).
>
>Finally, ends his "Russian Bias" article with "Keep in mind
>too that the bias method is but one of many problems already uncovered
>or waiting to be discovered".
>
>Do you really think there is any point to explaining to (who
>regards himself now an expert in the bias method) that the sign and
>magnitude of the bias depends only on the choice of the reference
>station or source and has no impact on the trends ? The MCDW stations
>are usually the first to be updated, hence it is clear that the average
>bias is 0 for the latest years if you start with MCDW, since the other
>sources do not have data yet for those years or no longer report.
>
> observations mostly reflect the fact that in Russia, 60-70 MCDW
>stations reported data each year after 1991, whereas no non_MCDW
>reports for 2007 are available, only 5 for 2006, 1 for 2005,..., 6 for
>1993, 26 for 1992, 94 for 1991 and 309 for 1990.
>
>Reto
>
>
>
>On Fri, 2007-09-28 at 23:36 -0500, James Hansen wrote:
> > Hi
> >
> > Thanks for the comments and suggestions. I spoke briefly with Reto.
> > He has looked into the routine written by Jay Glascoe to combine
> > records, and although its a language he is not familiar with, he
> > says that he can at least make the simple changes needed to test the
> > ordering of stations. Since we tested the ordering of stations in
> > the main part of the program (we are not sure whether Jay rechecked
> > that), we doubt that it would make a noticeable difference, but will
> > let you know.
> >
> > We didn't have time to discuss the other things yet. But I note
> > that tests in the past have shown such choices to have small impact.
> >
> > Regards, Jim Hansen
> >
> >
> > On 9/27/07, @charter.net> wrote:
> > Dear Dr. Hansen,
> >
> > I understand you are extremely busy, but I wanted to pass
> > along some analysis I have been doing on your method of
> > combining individual temperature records for a single station
> > using the "bias method", as described primarily in HL87.
> >

> > My preliminary analysis of the method seems to show that it
> > introduces an "artificial cooling" to station records before
> > 1987. This cooling seems to be introduced primarily as a
> > result of two things: the order selected for combining records
> > and the fact that annual and quarterly temperatures are
> > estimated prior to combining those records.
> >
> > In HL87 you acknowledge: "One potential disadvantage of the
> > method we have described for combining station records is that
> > the results, in principle, depend on the ordering of the
> > station records." However, the discussion that ensues is
> > around different stations rather than different records for
> > the same station. I am finding that, when using this method to
> > combine records from a single station, the ordering of records
> > has far more influence than expected.
> >
> > The descriptions I have seen for ordering stations in your
> > papers indicate that they are ordered from greatest number of
> > years of temperature record to the least number of years. In
> > practice what I find is that if an MCDW (Monthly Climatic Data
> > for the World) record exists, it is used first, even though it
> > is usually the shortest record (when it exists. it also the
> > latest record for a station). Because it is the first record
> > in the order, it is never biased, but all others preceding it
> > chronologically are biased. The overlap period with preceding
> > records seems to be somewhat short - usually four years,
> > sometimes five. Although HL87 discusses the combination of
> > stations within a gridcell, the implication is that the same
> > methodology is used for combining station records. This would
> > mean the minimum overlap period should be 20 years.
> >
> > In reading HL87 I would have expected the period of overlap to
> > be calculated using the months of overlap, which represents
> > the finest grain of measurement in the record GISS uses.
> > Instead, I have determined that the annual record is used,
> > which is the coarsest grain of measurement in the record used
> > by GISS. If the monthly records were complete, this would not
> > be an issue. In practice I find that they are usually not
> > complete, so an estimated annual average is often used when
> > determining overlap periods. In fact, the first year in a
> > record is almost always an estimate. This is because the
> > records begin in January, but the average is calculated from
> > December to November. Thus, the "missing" December value must
> > be estimated. The process of estimating annual averages prior
> > to combining individual records for a station is not one that
> > I have found documented thus far.
> >
> > As chance would have it, the process of combining records
> > using MCDW records first, the short overlap period between
> > MCDW records and previous records, and the fact that many
> > annual averages are estimated, seems to yield a clear cooling
> > bias to pre-1991 temperature records. An example can be seen

> > here with the Russian records.
> >
> >
> >
> > While I understand the rationale behind using the bias method
> > to combine station records within a grid cell, I don't fully
> > understand why it is used to combine separate records for an
> > individual station. As you note in your 1999 paper "In the
> > majority of cases the overlapping portions of the two records
> > are identical, representing the same measurements that have
> > made their way into more than one data set." This indicates
> > that a simple average of the records is appropriate.
> >
> > Why is the bias method better than the following?:
> > - For each station examine all monthly records for the station
> > simultaneously
> > - If no valid measurement exists in any record for a given
> > month, record NA (or equivalent)
> > - If exactly one valid measurement exists for a given month,
> > use that value
> > - If more than one valid measurement exists for a given month,
> > use the average of all valid measurements
> >
> > After all records have been combined in this manner, estimate
> > missing annual values where possible.
> >
> > I appreciate your thoughts on this.
> >
> >
> >
> >
> >
> >
> >
> >
>-
>Reto Ruedy <rruedy@giss.nasa.gov>

Subject: ADD
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 4 Aug 2007 08:23:15 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>

--------- Forwarded message ---------
From: [redacted]@gmail.com>
Date: Aug 4, 2007 6:54 AM
Subject: ADD
To: [redacted]@gmail.com

tel:
Will coral reefs be the first ecosystem to be eliminated by global warming?
Sign up for updates at: http://coralstory.blogspot.com/
Grains of Sand - observations from a strange planet at:
http://jebin08.blogspot.com/
Chinadialogue - China and the world discuss the environment and the future
http://www.chinadialogue.net/
"fatti non foste a viver come bruti,
ma per seguir virtute e canoscenza"

Subject: Re: GISS Raw Data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 7 Aug 2007 13:11:53 -0400
To: rruedy@giss.nasa.gov
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>

Reto, This is very good, but eliminate the last paragraph re Hansen-error, Reto error, as it looks like I am passing the buck - don't send the e-mail until I come in. Jim

On 8/7/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

Gavin,

Thanks for setting me straight - I completely agree with you: any attempts to teach or outsmart Steve are counterproductive and a total waste of time.

As soon as I hear from Jim, I'll send it off - in the mean time, Ken updated the site including July 07 with the new modification. So I'll change the end correspondingly.

Reto

On Tue, 2007-08-07 at 11:44 -0400, Gavin Schmidt wrote:
> I would not engage further than simply dealing with the points at hand -
> it's just going to further the issue. Thus I would suggest the following
> text alone (a couple of minor edits and one new line):
>
> ======
>
> The basic "GISS Surface Temperature Analysis" page starts with a
> "Background" section whose first paragraph contains the sentence:
> "Input data for the analysis ,...., is the unadjusted data of GHCN,
> except that the USHCN station records were replaced by a later corrected
> version". A similar statement appears in the "Abstract" and the
> "Introduction" section of our 2001 paper (JGR Vol 106, pg
> 23,947-23,948). The Introduction explains the above statement in more
> detail.
>
> When we originally got the USHCN data, they ended in 1999 and as far as I know,
> no major corrections were implemented after that time. Unlike the GHCN
> data, the USHCN data is not a product that is kept current on a regular
> basis. Hence we used (as you noticed) the GHCN data to extend the USHCN
> data.
>
> I agree with you that this simple procedure creates an artificial step
> in those cases where the correction was applied to the newest data,
> rather than bringing the older data in sync with the latest measurements
> - which would seem the natural way to go. Comparing the 1999 data in
> both data sets showed that in about half the cases where the 1999 data

> were changed, the GHCN data were higher than the USHCN data and in the
> other half it was the other way round.
>
> Eliminating those artificial steps should have little impact even
> on the US temperature trend (much less the global trend), but it is a good
> idea to do so and I'd like to thank you for bringing this to our attention.
>
> Starting with our next update (sometime later this week) an offset
> based on the last 10 years of overlap in the two data sets will be
> applied and our on-line documentation will be augmented
> correspondingly.
>
> I tested the modification with the data now on display:
> The table data (section 3 on the basic temperature site) differed
> occasionally by a 1 in the last digit (0.01 C). In the display most
> sensitive to that change - the US-graph of annual means - the warming
> decreased by about 0.15 C in the years 2000-2006.
>
> You should perhaps note that your post 'Hansen's Y2K error' should
> really be titled Reto's Y2K error.
>
> Respectfully,
>
> etc...
>
> ======
>
> Gavin

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: your vacation
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 7 Aug 2007 14:54:59 -0400
To: rruedy@giss.nasa.gov
CC: "Makiko Sato" <makis@giss.nasa.gov>

BTW, your note to McIntyre perhaps should include a statement such as. This change and its effect will be noted in our next paper on temperature analysis submitted for publication and in our end-of-year temperature summary. Jim

On 8/7/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Makiko,
>
> Reto
>
> On Tue, 2007-08-07 at 13:29 -0400, Makiko Sato wrote:
> > Reto,
> >
> > `
> >
> > Makiko

Subject: Re: Iowa Edition of Declaration of Stewardship
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 8 Aug 2007 10:52:32 -0400
To: ' @conbio.org>

thanks, good point. Jim

On 8/8/07, @conbio.org> wrote:

Jim,

At the Economic Policy Institute last Friday we had a good discussion on greenhouse gas taxes and other means of making the shift and my message to them that we can impose tarriffs now on the GHG's associated with imports as long as they accurately reflect our domestic producers' costs of controlling pollution or paying for it, was well received. I also suggested using the proceeds for loans back to the tarrifed countries to help them cut GHG in the production methods. Eventually we would need to embargo goods from recalcitrant countries just as the world has banned trade in highly endangered species and whales, and ozone depleting chemicals, etc. SCB submitted testimony on that to House Ways and Means.

You should add that to your speech I think since both sides will wait for the other to act unless we force the issue.

From: James Hansen [mailto:jhansen@giss.nasa.gov]
Sent: Tuesday, August 07, 2007 9:07 PM
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov
Subject: Iowa Edition of Declaration of Stewardship

To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject.

Talk given at Des Moines last Sunday, with description of Declaration of Stewardship slightly edited for clarity, is attached and at:
http://www.columbia.edu/~jeh1/Iowa_70805.pdf

Criticisms welcome.

Jim

Subject: Fwd: GISS Raw Data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 9 Aug 2007 05:51:41 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Reto, what is the source of data for the present analysis? Is it pratical to provide that? Jim

---------- Forwarded message ----------
From: **Steve McIntyre** <stephen.mcintyre@utoronto.ca>
Date: Aug 8, 2007 10:46 AM
Subject: RE: GISS Raw Data
To: rruedy@giss.nasa.gov
Cc: "James E. Hansen" <jhansen@giss.nasa.gov>

Dear Dr Ruedy,

Thank you for this information and for the courteous acknowledgement at your website. I can now see where your post-2000 data comes from, but I remain unable to identify a digital source for your data prior to 2000 from available information. I have compared GISS raw to all the archived USHCN versions and have been unable to find a match for US data. In some cases, the differences are substantial.

Can you provide me with (1) a URL from which the U.S. data prior to 2000 (in the version that you used) can be downloaded. (2) If this is no longer possible due to the passage of time, could you please provide me with a copy of the data that you used (or upload it to an area of your FTP site) and also provide its provenance and date of acquisition? Obviously mere print citations are inadequate for this purpose.

I would like to assess the impact of these modifications on the US and global averages for myself. I would appreciate a copy of the source code used for these calculations.

Regards, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto: rruedy@giss.nasa.gov]
Sent: Tuesday, August 07, 2007 5:33 PM
To: Steve McIntyre
Cc: James E. Hansen; gavin@giss.nasa.gov
Subject: Re: GISS Raw Data

Dear Sir,

As to the question about documentation, the basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence:"Input data for the analysis ,..., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

In 2000, USHCN provided us with a file with corrections not contained in the GHCN data. Unlike the GHCN data, that product is not kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend those data in our further updates (2000-present).

I agree with you that this simple procedure creates an artificial step if some new corrections were applied to the newest data, rather than bringing the older data in sync with the latest measurements - as I naively assumed. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round with the plus-corrections slightly outweighing the minus-corrections.

Although trying to eliminate those steps should have little impact on the US temperature trend (much less the global trend), it seems a good idea to do so and I'd like to thank you for bringing this oversight to our attention.

When we did our monthly update this morning, an offset based on the last 10 years of overlap in the two data sets was applied and our on-line documentation was changed correspondingly with an acknowledgment of your contribution. This change and its effect will be noted in our next paper on temperature analysis and in our end-of-year temperature summary.

The effect on global means and all our tables was less than 0.01 C. In the display most sensitive to that change - the US-graph of annual means - the anomalies decreased by about 0.15 C in the years 2000-2006.

Respectfully,

Reto A Ruedy

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:
> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it
> appears to me that, for series after January 2000, you use the USHCN
> raw version whereas in the immediately prior period you used USHCN

> time-of-observation or adjusted version. In some cases, this
> introduces a seemingly unjustified step in January 2000.
>
> I am unaware of any mention of this change in procedure in any
> published methodological descriptions and am puzzled as to its
> rationale. Can you clarify this for me?
>
> In addition, could you provide me with any documentation (additional
> to already published material) providing information on the
> calculation of GISS raw and adjusted series from USHCN versions,
> including relevant source code. Thank you for your attention, Stephen
> McIntyre
>

Subject: temperature data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 9 Aug 2007 10:01:02 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

As an alternative to attempting to reconstruct the origins of all station records in the present analysis, is it easier to use current GHCN data per se and show that the difference that causes in global result is negligible? Jim

Subject: Re: Ers 2007 - THANK YOU!
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 9 Aug 2007 10:56:28 -0400
To: " @met.no>

Well, thanks! Nice encouragement as I try to figure out a minimum-impact-on-my-time way to deal with a 'McIntyre-attack'. Jim

On 8/9/07, @met.no> wrote:

> Dear Jim,
>
> You don't know me, but I'm an oceanographer from
> and I worked at in the mid-90s. And I was a
> on this last ipcc report. And what I wanted to say was that I'm now
> spending as much time travelling around the country (which is
> telling layman about climate change as I do being scientist. Probably more,
> actually. Feeling a bit awkward about it from the academic point of view
> (we're supposed to spend our time and energy on publishing, right!?), but
> feeling 100% convinced that this is my duty as a citizen. So, to make a long
> story short: I enjoyed your ERS 2007 paper on scientific reticence
> tremendously, feeling that you know exactly how to verbalize my thoughts.
>
> So thank you very much!
>
> All the best

Subject: Fwd: revisions to annual temps
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 9 Aug 2007 14:46:18 -0400
To: rruedy@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>

---------- Forwarded message ----------
From: **Andrew Revkin** <anrevk@nytimes.com>
Date: Aug 9, 2007 2:28 PM
Subject: revisions to annual temps
To: jhansen@giss.nasa.gov, gschmidt@giss.nasa.gov

hi,

you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.

were the revisions published yet, or are they updated in databases alone?

also, are you doing same for global mean temp or is this specific issue related to US?

ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: *The North Pole Was Here*
Amazon book: *The Burning Season*
Acoustic-roots band Uncle Wade

Subject: Fwd: Question
From: James Hansen <jhansen@giss.nasa.gov>
Date: Thu, 09 Aug 2007 18:13:23 -0400
To: rruedy@giss.nasa.gov, makis@giss.nasa.gov

DomainKey-Signature: a=rsa-sha1; q=dns; c=nofws; s=s1024; d=yahoo.com; h=Received:X-YMail-OSG:From:To:Subject:Date:Message-ID:MIME-Version:Content-Type:X-Mailer:Thread-Index:X-MimeOLE:Disposition-Notification-To;
b=ffkH2tg2ti5Z4nC6MwTlbe8N2agSXy0S+Mr4wPMswbQJdfchkU+64OU3se8vtx+Di6KFgNc1dgwzzbp5PDkotaOObRYkc+Usnl/0ugGm7gw8KnFEjITxLy9cc1DAIhnq4sSMI
;
X-YMail-OSG: kEot1KsVM1l1f1VC3lqkqzwt1okpR3HYVAPxQCuUAnoXdfzY1j2A3q7Zk.gU1cYAwj5E.mbIWXbc97AenQB33NLMIg0vLabH2jPKs5nRtcb6PiL2mA--
From: ' @yahoo.com>
To: <James.E.Hansen@nasa.gov>
Subject: Question
Date: Thu, 9 Aug 2007 18:55:53 -0300
X-Mailer: Microsoft Office Outlook 11
Thread-Index: Acfiaz/NMEFUhL8WIT7+QO5t4TLtH8Q==

Dr. Hansen,

Below is a link to a posting today that I was hoping you could comment on.

It is dispiriting that questions regarding climate change have been politicized, but I was hoping you could shed some light on this posting.

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Thank you very much for any clarification you can provide.

Subject: Re: revisions to annual temps
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 9 Aug 2007 22:34:43 -0500
To: "Andrew Revkin" <anrevk@nytimes.com>
CC: gschmidt@giss.nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>

Hi Andy,

This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.

The net effect averaged over the U.S. was an error of about 0.15C or less in the post-2000 years, well within the uncertainty bar that we give. The effect on the global mean was of the order of a thousands of a degree, i.e., entirely negligible.

It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!

Jim
(Reto, please correct if there is anything in the above that is not right.)

On 8/9/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

> hi,
>
> you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.
>
> were the revisions published yet, or are they updated in databases alone?
>
> also, are you doing same for global mean temp or is this specific issue related to US?
>
> ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: *The North Pole Was Here*
> Amazon book: *The Burning Season*

Acoustic-roots band Uncle Wade

Subject: Fwd: Request
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 10:23:20 -0500
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Reto,

I am being besieged by e-mails and calls about this, so we need to do something promptly, as there will be stories written today for publication tomorrow. Let me know what the chances are that you will be able to have the comparative global temperature curves that we discussed yesterday.

By the way, Makiko, do you remember if we ever make any statement about how different years ranked for the United States temperatures? There are several demands that we issue a press release correcting our wrong results and declaring that 1934 is now the warmest year on record in the U.S., also that 4 of the 10 warmest years were in the 1930s and only 3 in the last 10 years.

Jim

--------- Forwarded message ---------
From: **Lewis, Charles (National Post)** <clewis@nationalpost.com>
Date: Aug 10, 2007 9:40 AM
Subject: Request
To: jhansen@giss.nasa.gov

Leslie McCarthy suggested I call you. A researcher in Toronto (Steve McIntyre) says he sent information to NASA to correct annual U.S. Temperature data. His point is that 1934 now becomes the warmest year. I'd like to talk to you for a few minutes about this and what significance, if any, it has. I can be reached at 416-383-2472. Thanks

Charles Lewis
National Post
1450 Don Mills Road
Toronto, Ontario M3B 2X7
Tel (416) 383-2472 Fax (416) 510-6830
e-mail: clewis@nationalpost.com
visit us at http://www.nationalpost.com

Subject: Fwd: FW: GISS - Truth driven vs agenda driven
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 11:59:59 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Makiko, Reto,
I am being beseiged by these (see below). The appropriate response is to show the curves for U.S. and global temperatures before and after (before and after McIntyre's correction). Makiko doubts that this is possible because the earlier result has been "thrown away". We will never live this down if we give such a statement. It must be possible to reconstruct the "before" result. Unfortunately, this needs to be done soon, as there are various writers with deadlines this afternoon. I hope that is possible -- this should have a higher priority that the calculation that we mentioned yesterday.
Jim

By the way, I think that we should save the results of the analyses at least once per year, so we will have a record of how they change.

---------- Forwarded message ----------
From: lesgiss@verizon.net < lesgiss@verizon.net>
Date: Aug 10, 2007 11:44 AM
Subject: FW: GISS - Truth driven vs agenda driven
To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov

Original Message:

From: @shaw.ca
Date: Fri, 10 Aug 2007 09:34:53 -0700
To: Leslie.M.McCarthy@nasa.gov
Subject: GISS - Truth driven vs agenda driven

Dear Leslie,

My fellow Canadians have unveiled another Global warming scam - yours!

Now that we know Mr. Hansen used incorrect data or procedures in determining the "hottest years", concluding that the top 5 warmest yeats since the 1890s are : 2005, 1998, 2002, 2003, 2006.

Yet, there on your website (http://www.giss.nasa.gov/research/news/20070208/) is the information still making what is now known to be a bogus claim.

Yes we are at a tipping point all right. And the truth is spilling all over your pro-AGW agenda.

Just like Mr. Manns infamous Hockey Stick graph, which was proven fraudulent by the same people who found your glaring errors, another lie bites the dust. Funny thing is, when they determined Mr. Mann was fudging things, they found that Mr. Mann's "peer reviewed" work was reviewed but not put through a rigourous, truth seeking, audit. That led to them forming climateaudit.org, to apply the audits that are so obviously missing from the process. And BINGO - Mr. Hansen is unmasked as a zealot.

Now, are you honestly a scientific driven institution, or will you admit to being an agenda driven one? I await the press conference to announce that you have had to revise the hottest years list. I await the update to your website to reflect the new, peer-audited, results. I await the confession that you made a huge mistake. I await the firing of those who created and flogged this lie.

Will you do the right thing?

Sincerely

Subject: ADD KRIS FRENCH TO MEDIA LIST
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 14:12:33 -0500
To: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>

---------- Forwarded message ----------
From: **Reto Ruedy** <rruedy@giss.nasa.gov>
Date: Aug 10, 2007 2:02 PM
Subject: [Fwd: Re: Y2K correction]
To: jhansen@giss.nasa.gov, makis@giss.nasa.gov

-------- Forwarded Message --------
From: KrFrench@ngs.org
To: rruedy@giss.nasa.gov
Subject: Re: Y2K correction
Date: Fri, 10 Aug 2007 14:45:58 -0400

Hi Reto,

Thanks for the heads up on this and glad we don't have to change anything because it's printed and done. Looks very nice and I'll be sending complimentary copies your way once it is published. We'll keep your email in the file in case we receive letters about this.

Best,
Kris

Kris French
National Geographic Maps
Senior Research Cartographer
1145 17th Street NW
Washington, D.C. 20036
Tel. 202-775-6173 Fax 202-429-5704
email: krfrench@ngs.org

Reto Ruedy <rruedy@giss.nasa.gov>

08/10/2007 02:42 PM
Please respond to
rruedy@giss.nasa.gov

To

KrFrench@ngs.org
cc

Subject
Y2K correction

Hi Kris,

Steve McIntyre, a former mining executive, now a blogger and global warming denier, is blowing a small correction in our procedure of handling US data way out of proportion. The correction has absolutely no impact on the global mean temperature time series, over the US it made a difference of .15 C.

I checked what this correction does to your map and it does change the colors somewhat over parts of the US; the rest of the world is unaffected. Even the change over the US is way within the margin of error (0.5 C). So there is little need to make any changes.

The timing is a bit awkward, though. Sorry for that,

Reto

Subject: ADD
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 14:20:35 -0500
To: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>

---------- Forwarded message ----------
From: @gmail.com>
Date: Aug 10, 2007 10:12 AM
Subject: Years of bad data corrected; 1998 no longer the warmest year on record
To: James.E.Hansen@nasa.gov

Dear Dr. Hansen,

I'm doing some research on anthropological global warming. The problem I'm having now is that NASA has now released corrected figures, and the changes are truly astounding. The warmest year on record is now 1934. 1998 (long referred to as record-breaking) moves to second place. 1921 takes third. In fact, 5 of the 10 warmest years on record now **all occur before World War II.** This change leads me to believe NASA is being manipulated by those who "deny" the globe is in a warming trend. Could you please help me understand these revelations? Thank you and have a nice day.

Sincerely,

Subject: New Email
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 14:54:55 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: "Darnell Cain" <dcain@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

o.k., here is the draft e-mail, which needs the figures and links -- I am being besieged by
it is hard to read right now. Jim

LightUpstairs.10Aug2007.doc	**Content-Type:** application/msword **Content-Encoding:** base64

A Light On Upstairs?

To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject

Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis (XXXXXX –link to 2001 paper) had a flaw in the U.S. data. In our most recent update of the analysis method (originally published in our 1981 Science paper – LINK HERE) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down. This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

The flaw did have a noticeable effect on mean U.S. temperature anomalies, as much as 0.15C, as shown in Figure 1 below (for years 2001 and later, and 5 year mean for 1999 and later). The effect on global temperature (Figure 2) was of order one-thousands of a degree, so the corrected and uncorrected curves are indistinguishable.

Somehow this data flaw was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must "step down", or that I must "vanish". Hmm, I am not very good at magic tricks.

I am always a bit puzzled by the views that seem to come from conservative extremes, a bit disconcerting as I come from a moderately conservative state and consider myself a moderate conservative in most ways – puzzling because it seems to me that conservatives should be the first ones standing up for preserving Creation and for the rights of the young and the unborn. After all, that is the basic intergenerational issue in global arming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem.

Jim

Subject: Re: New Email
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:39:37 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Darnell Cain" <dcain@giss.nasa.gov>, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov

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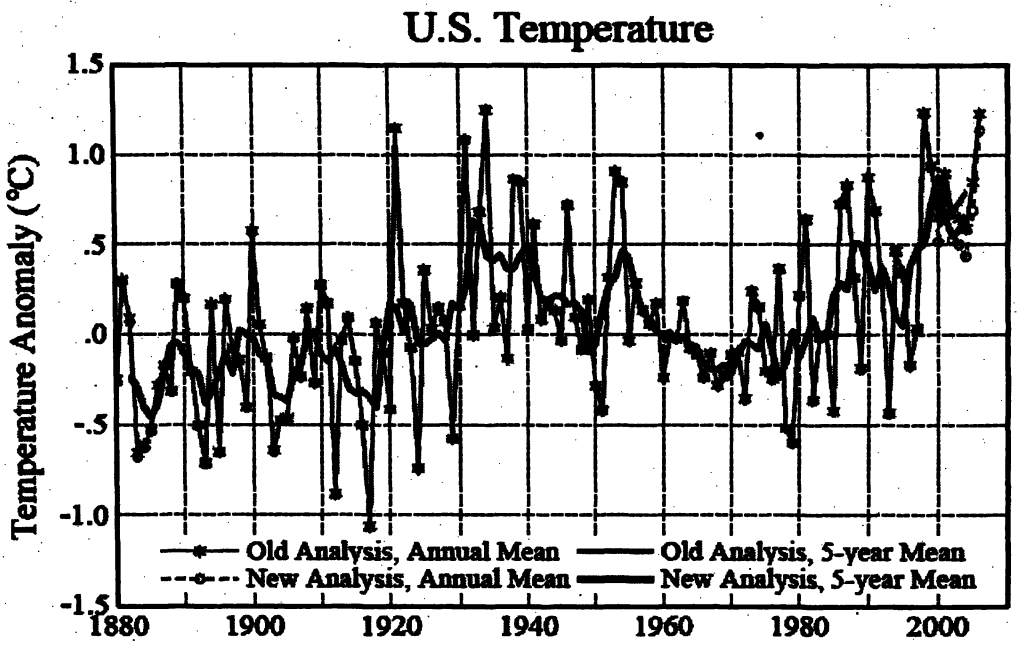

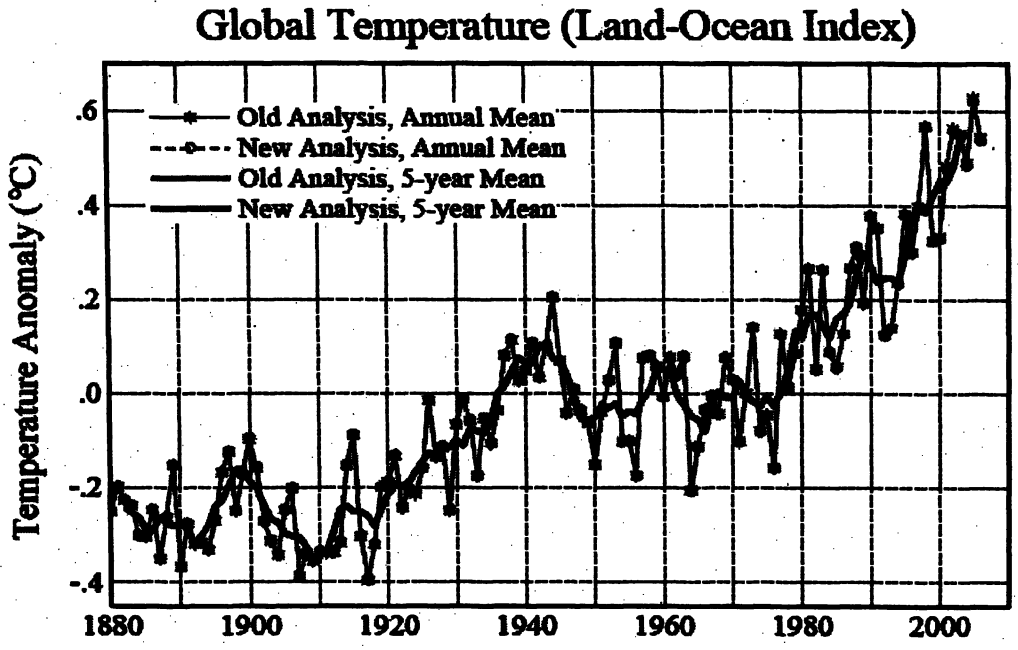

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From: James Hansen <jhansen@giss.nasa.gov>
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To: jhansen@giss.nasa.gov
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LightUpstairs.10Aug2007-x.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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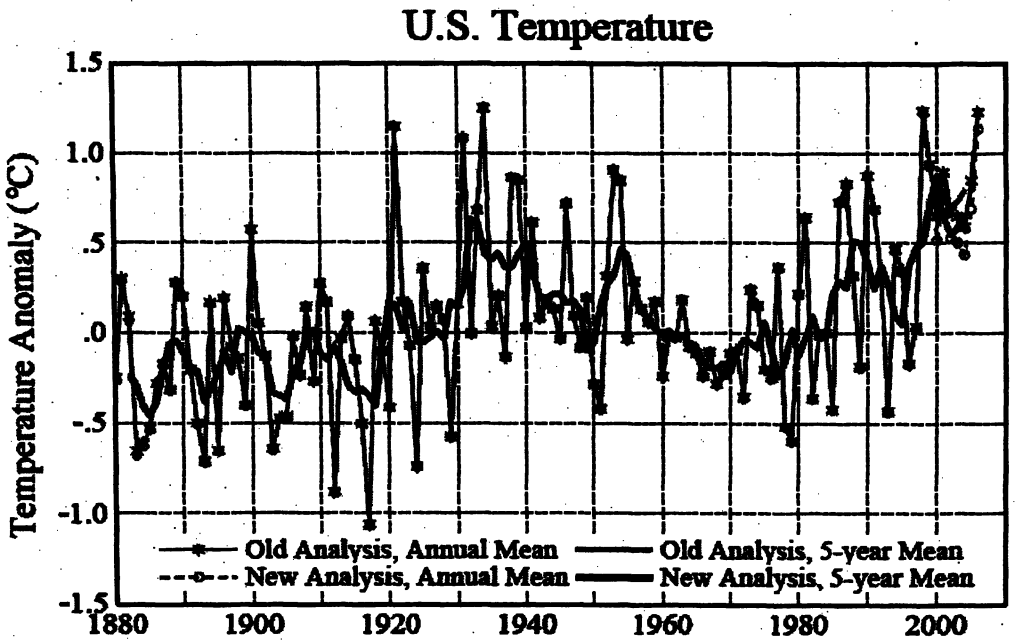

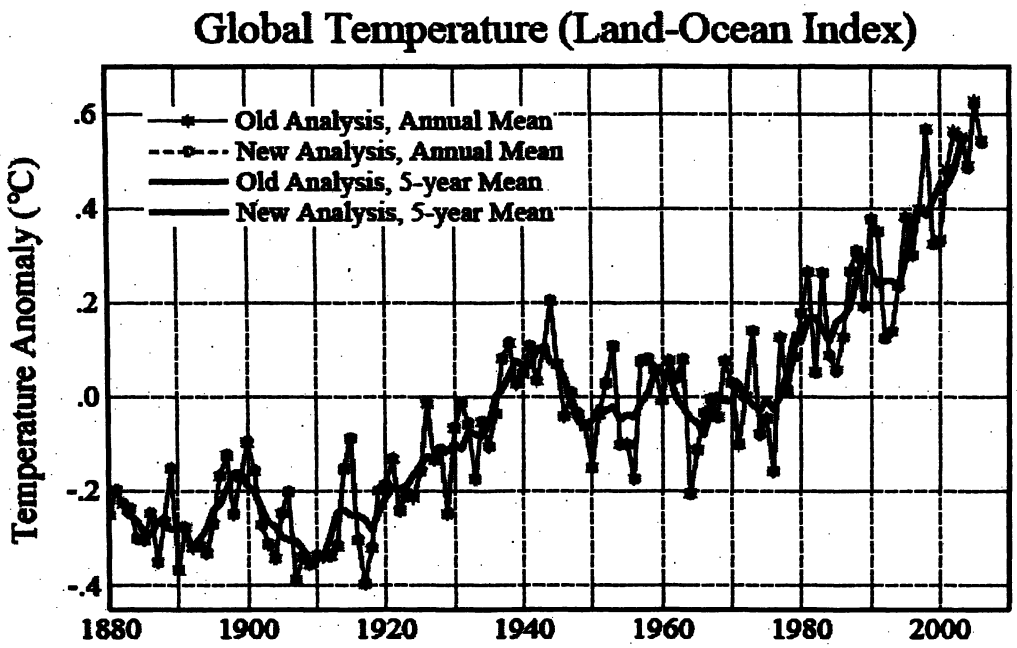

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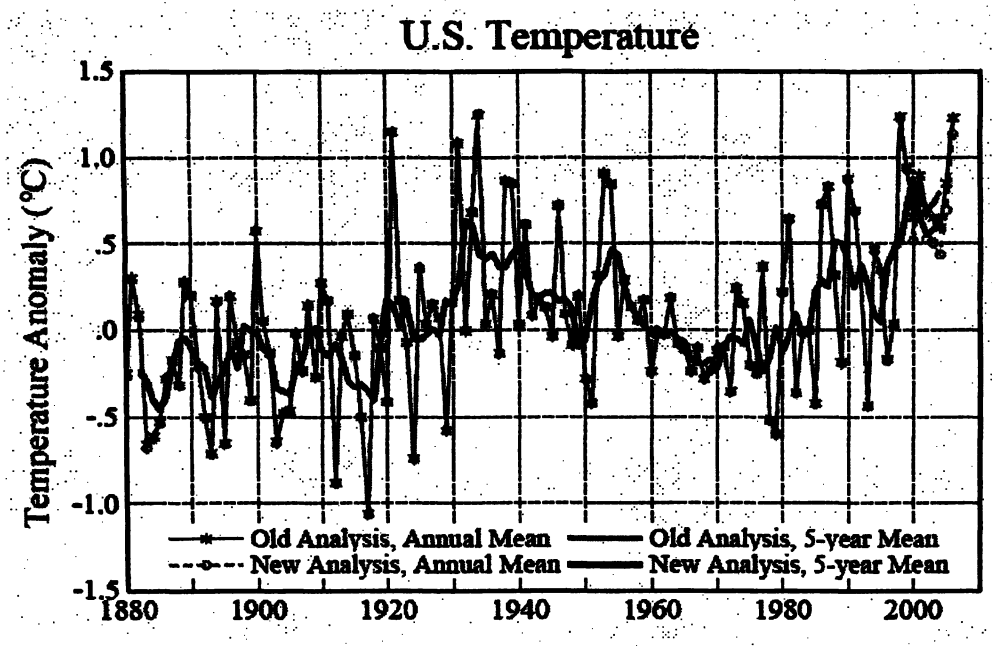

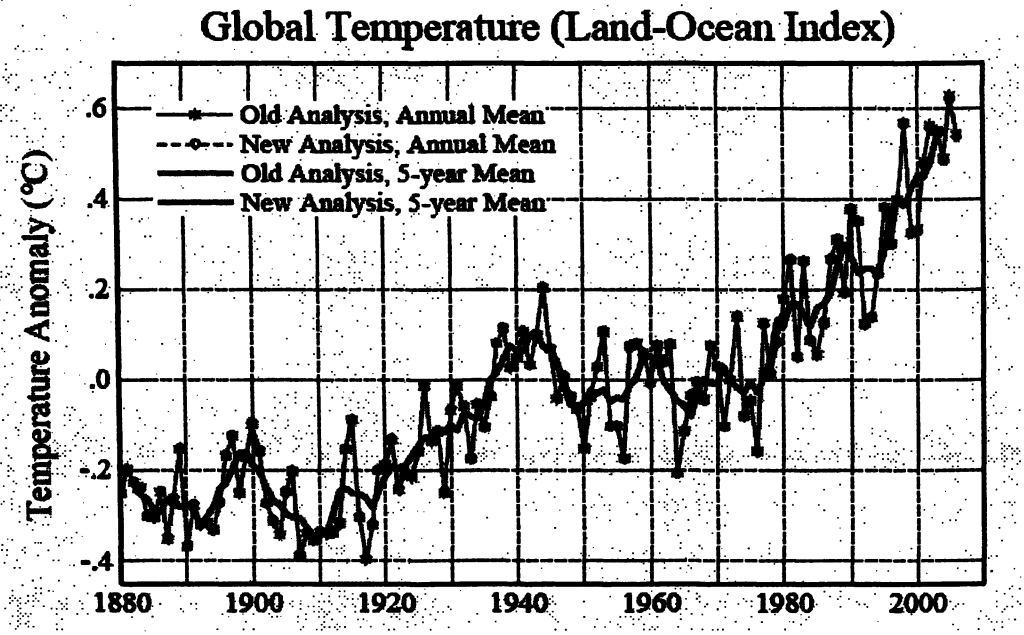

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Somehow the flaw in 2001-2007 U.S. data was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must "step down", or that I must "vanish". Hmm, I am not very good at magic tricks.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem, though.

Jim

Subject: Re: FW: Washington Times--from HQ PAO
From: James Hansen <jhansen@giss.nasa.gov>
Date: Mon, 13 Aug 2007 20:50:56 -0400
To: lesgiss@verizon.net, @gmail.com, ltravis@giss.nasa.gov, gschmidt@giss.nasa.gov, rruedy@giss.nasa.gov

send them "A Light on Upstairs?"

At 03:42 PM 8/13/2007, lesgiss@verizon.net wrote:

> Hi Jim, Reto and Gavin:
>
> Tabatha Thompson is an SMD PAO at HQ and is inquiring about the GISTEMP changes....do you want to respond to her directly?? Reto did send me Jim's response to Andy Revkin, as well as a bit more clarification, but I don't know if you want that sent, so I'll wait until instructed.
>
> Please let me know ASAP.
>
> Thanks.
>
> Leslie
>
> Original Message:
> ---
> From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> Date: Mon, 13 Aug 2007 13:28:05 -0400
> To: leslie.m.mccarthy@nasa.gov, lesgiss@verizon.net, scole@pop600.gsfc.nasa.gov, dherring@climate.gsfc.nasa.gov, edward.s.campion@nasa.gov, alan.d.buis@nasa.gov
> Subject: Washington Times
>
> All --
> Can any of you help me find the place on the NASA site to which he's referring? I need to get back to a reporter, so I'd love any help I can get. Our HQ scientists aren't familiar with any change. Thanks!
> Tabatha
>
> ---
>
> From: Dunbar, Brian (HQ-NB050)
> Sent: Monday, August 13, 2007 10:43 AM
> To: Brown, Dwayne C. (HQ-NB060); Thompson, Tabatha (HQ-NB000)
> Subject:

http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1012/commentary

Not sure what web site he's referring to.

bd

Subject: Fwd: A Light On Upstairs?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 11 Aug 2007 04:25:00 -0500
To: @fairmontstate.edu>

Your e-mail should be framed, as a counterweight to the all the viscous ad hominem e-mails that have descended through the ethernet.

The answer to your first question is in the attachment. You will see that the flaw in the analysis was of a sort that might occasionally happen, without being detected for a while because the effect is so small. (The large effect claimed in some of the hate-mails was apparently due to some people confusing conclusions about which year was warmest in the United States and which year was warmest on the global average.)

The answer to your second question is that this matter has no effect whatever on climate models or the interpretation of results from climate models, as you can infer yourself once you have looked at the response to your first question.

Jim Hansen

---------- Forwarded message ----------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Aug 10, 2007 5:16 PM
Subject: A Light On Upstairs?
To: jhansen@giss.nasa.gov
Cc: jhansen@giss.nasa.gov

> To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject but this line should be included in the e-mail.

LightUpstairs.10Aug2007-x.doc	**Content-Type:** application/msword **Content-Encoding:** base64

~~LightUpstairs.10Aug2007-x.pdf~~

LightUpstairs.10Aug2007-x.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

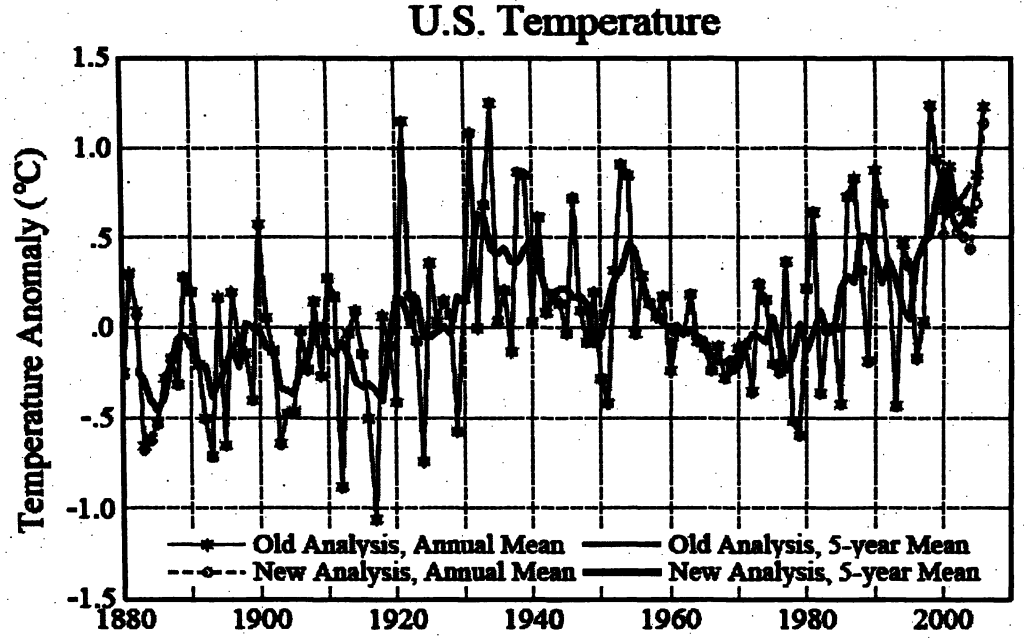
A Light On Upstairs?

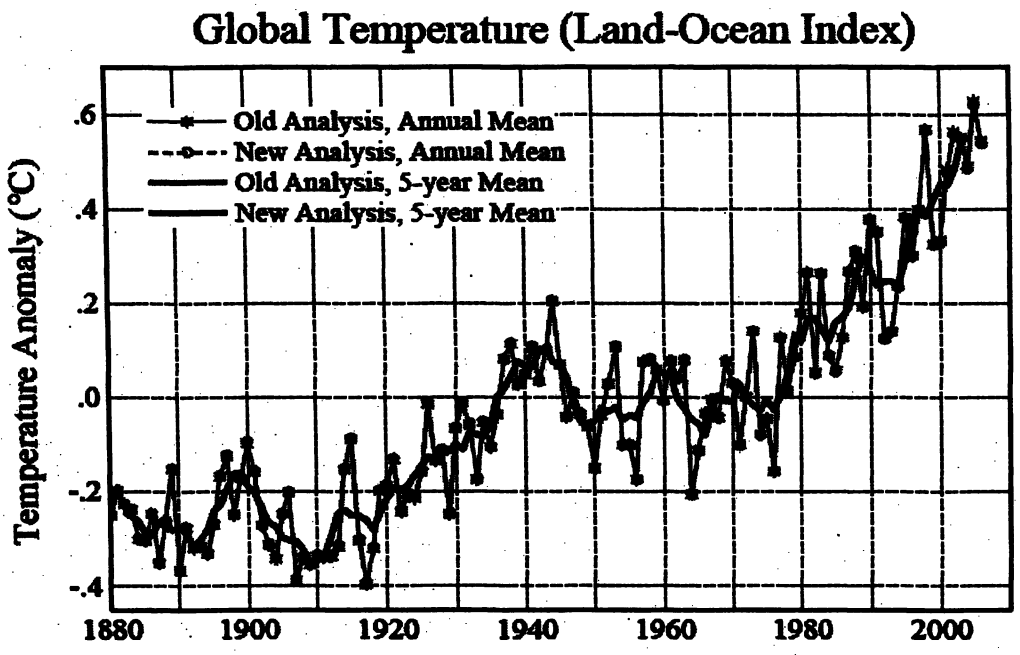
Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis (http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) had a flaw in the U.S. data. In that (2001) update of the analysis method (originally published in our 1981 Science paper – http://pubs.giss.nasa.gov/abstracts/1981/Hansen_etal.html) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations are in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in 2001 in the records at those stations, some up, some down (over U.S. only). This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

The flaw did have a noticeable effect on mean U.S. temperature anomalies, as much as 0.15°C, as shown in Figure 1 below (for years 2001 and later, and 5 year mean for 1999 and later). The effect on global temperature (Figure 2) was of order one-thousandth of a degree, so the corrected and uncorrected curves are indistinguishable.





Contrary to some of the statements flying around the internet, there is no effect on the rankings of global temperature. Also our prior analysis had 1934 as the warmest year in the U.S. (see the 2001 paper above), and it continues to be the warmest year, both before and after the correction to post 2000 temperatures. However, as we note in that paper, the 1934 and 1998 temperature are practically the same, the difference being much smaller than the uncertainty.

Somehow the flaw in 2001-2007 U.S. data was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must "step down", or that I must "vanish". Hmm, I am not very good at magic tricks.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem, though.

Jim

Subject: Fwd: Changes to SAT measurements tracking down the truth for a change
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 11 Aug 2007 04:25:52 -0500
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

---------- Forwarded message ----------
From: @fairmontstate.edu>
Date: Aug 10, 2007 11:45 PM
Subject: Changes to SAT measurements tracking down the truth for a change
To: James.E.Hansen@nasa.gov

Dr. Hansen,

I am a student at Fairmont State University. Today FOX news reported that a change in temperature modeling by GISS seriously undermines global warming claims. Rather than duke it out in the streets with people who watch FOX religiously, I decided my best course of action was to contact you directly.

Could you please answer two questions for me. First, in layman-dummy talk, what were the recent changes, and second, what does it mean for global climate modeling, especially global warming modeling?

Thank you in advance for your kind patience and reasoned response.

Subject: Re: revisions to annual temps
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 11 Aug 2007 11:04:14 -0500
To: "Andrew Revkin" <anrevk@nytimes.com>
CC: gschmidt@giss.nasa.gov, cdrar@giss.nasa.gov

sorry, just noticed this, my box being overfull. The warming (during the industrial era, since the 1800s) in the U.S. is similar to the global warming. Of course, as the contiguous U.S. is only 2% of the global area, the unforced variability is much greater.

Not sure what you mean though -- the "reanalysis" has not changed anything, as you can see by looking at the two graphs that I sent out. The past decade, 1998-2007, is extremely warm in the U.S., about 1.2F warmer than 1951-1980 climatology. The "reanalysis" did not change the fact that we found 1934 to be a hair warmer than 1998 and 2006, but the differences are smaller than the uncertainty. (NOAA NCDC finds 1934 a hair cooler, also insignificant difference.)

As for the future in the U.S., you can look for the warming to become more obvious during the next decade or two, as the competition between GHGs and aerosols shifts more heavily to GHGs.

Jim

On 8/10/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

> hey jim,
>
> given that quite a few folks (gore and some enviros particularly) have often used the USA temp trends in arguments for action (string of record years) it's hard for me to ignore the reanalysis of those annual temps -- even though my own focus remains global mean temp.
>
> essentially, should people always have paid less attention to US (48 state) trend as a meaningful signal of AGW?
> (now that all those earlier warm years intrude, it certainly makes the case that regional data can be a red herring)
>
> happy to discuss briefly by phone.
> til 6 p.m. or so
>
> At 11:34 PM 8/9/2007, you wrote:
>
> > Hi Andy,
> >
> > This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.

The net effect averaged over the U.S. was an error of about 0.15C or less in the post-2000 years, well within the uncertainty bar that we give. The effect on the global mean was of the order of a thousands of a degree, i.e., entirely negligible.

It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!

Jim
(Reto, please correct if there is anything in the above that is not right.)

On 8/9/07, **Andrew Revkin** < anrevk@nytimes.com
> wrote:

hi,

you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.

were the revisions published yet, or are they updated in databases alone?

also, are you doing same for global mean temp or is this specific issue related to US?

ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: The North Pole Was Here
Amazon book: The Burning Season
Acoustic-roots band Uncle Wade

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Arctic book: *The North Pole Was Here*
Amazon book: *The Burning Season*
Acoustic-roots band Uncle Wade

Subject: Re: Fwd: US temperature correction graphic and file
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 12 Aug 2007 12:02:10 -0500
To: rruedy@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>

Yes, the brouhaha is surely not over. So it is important to do the calculation that we discussed the last time we met. Jim

On 8/12/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> It's probably not worth mentioning that some of the differences are due to the fact that the original map was created on January 12, 2007, when some December 2006 and earlier data may not have been reported yet.
>
> Your display shows the effect of the correction only, hence may differ a little from s. I'm bracing myself against accusations of white wash attempts.
>
> Reto
>
> On Sun, 2007-08-12 at 09:54 -0500, James Hansen wrote:
> >
> >
> > --------- Forwarded message ---------
> > From: @berkeley.edu>
> > Date: Aug 12, 2007 6:56 AM
> > Subject: US temperature correction graphic and file
> > To: Gavin Schmidt <gschmidt@giss.nasa.gov>, Stephen McIntyre
> > <smcintyre ca>, @itworks.com>,
> > @gmail.com>, James Hansen <jhansen@giss.nasa.gov>
> >
> > In light of the recent fuss over the significance of the correction to
> > the United States temperature record, I tracked down a copy of the
> > data as it existed on August 1 st (from MSN's search engine cache) and
> > made a direct comparison (something that was largely lacking in much
> > of the coverage of this issue).
> >
> >
> >
> > I am distributing the comparison numbers and a graphic made from them
> > to many of the principle commentators on this issue. Feel free to use
> > and redistribute this at will, though I would appreciate an
> > acknowledgment if you do so.
> >
> >
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> >
> > http://www.globalwarmingart.com/
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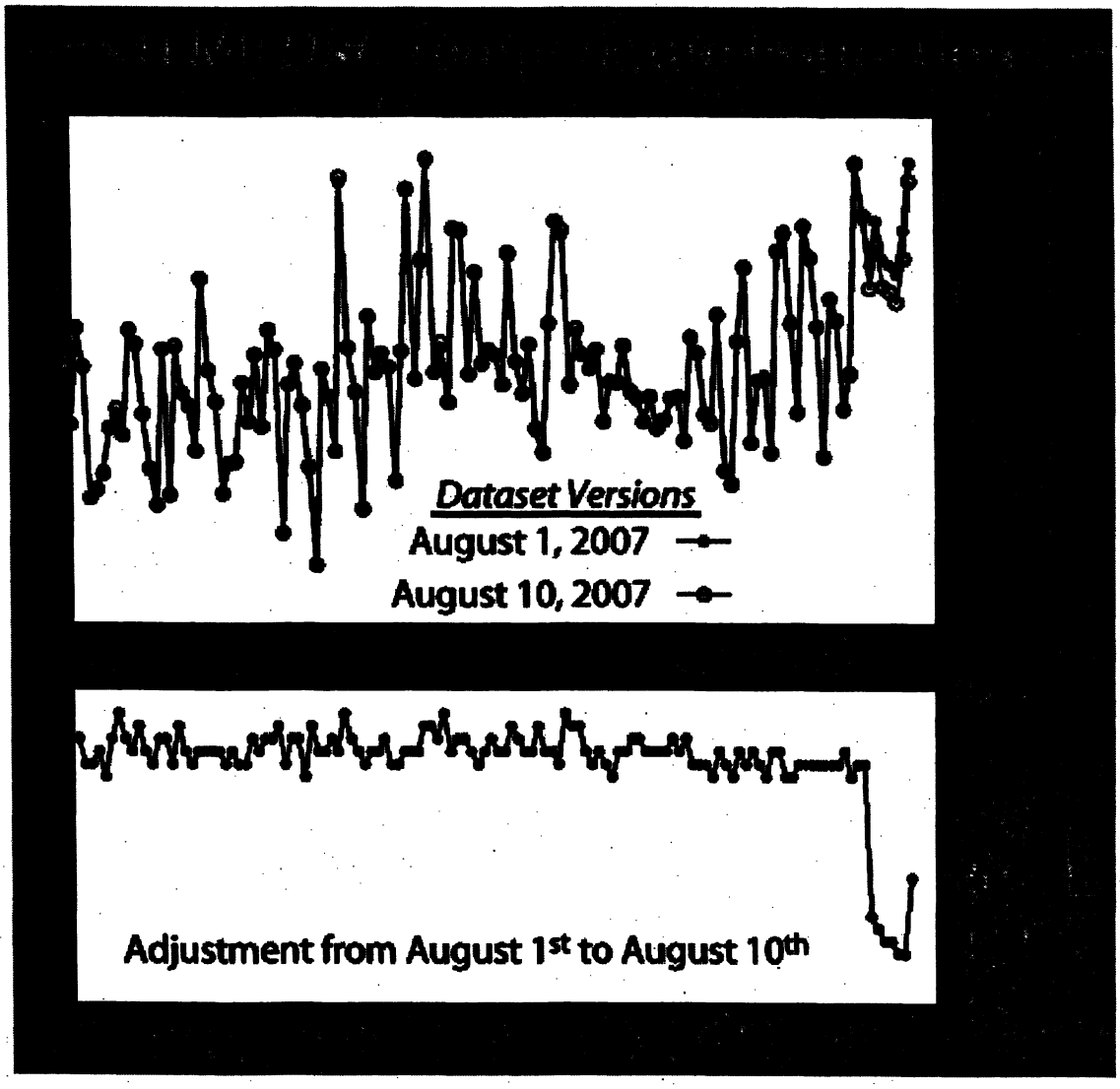


usa_temp_correction.xls	**Content-Type:** application/vnd.ms-excel **Content-Encoding:** base64

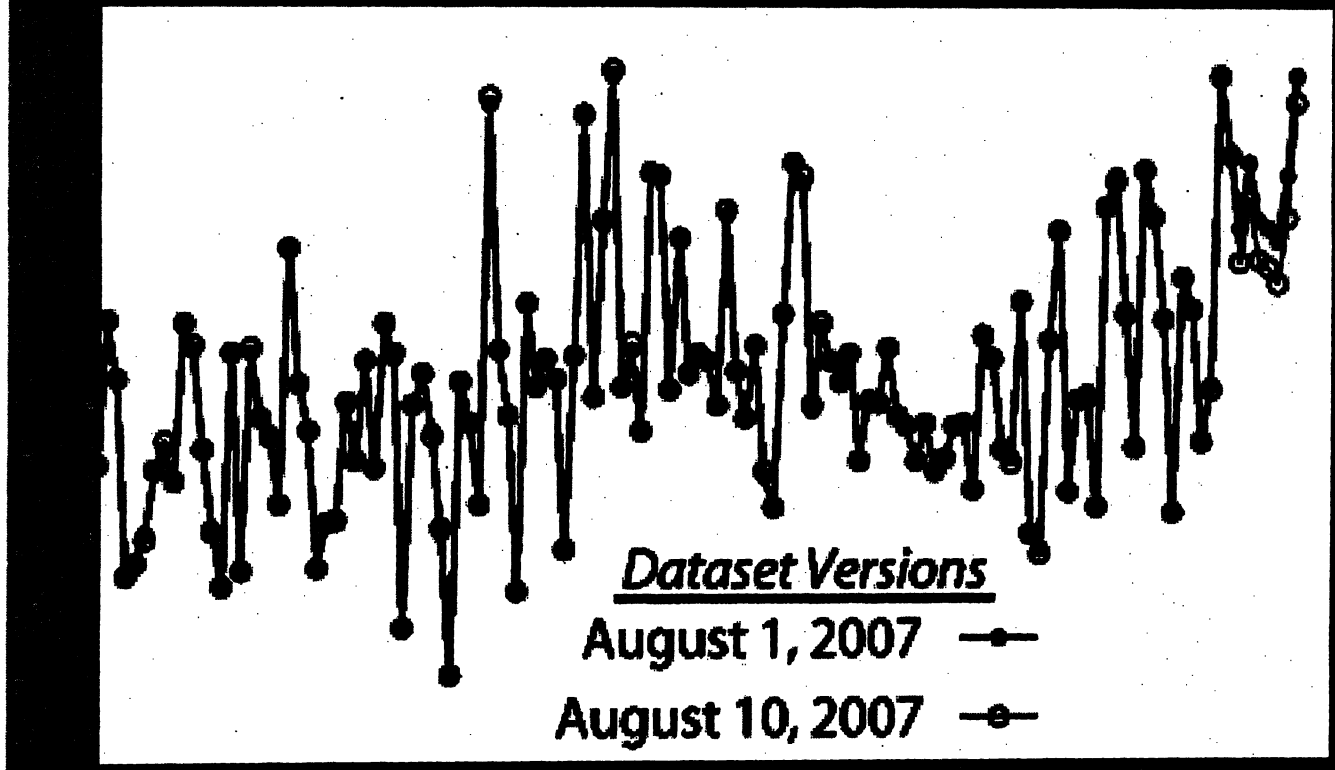
—gistemp_correction.png

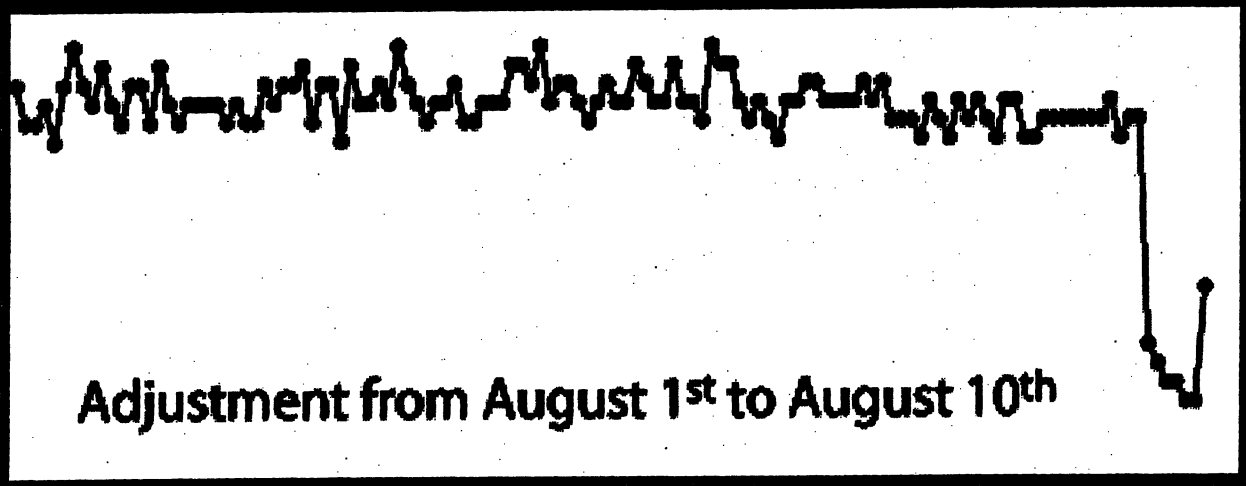
gistemp_correction.png	**Content-Type:** image/png **Content-Encoding:** base64

	August 1, 2007		August 10, 2007		Difference	
	Annual	5-year	Annual	5-year	Annual	5-year
1880	-0.27		-0.26		0.01	
1881	0.28		0.29		0.01	
1882	0.08	-0.24	0.07	-0.24	-0.01	0
1883	-0.67	-0.29	-0.68	-0.3	-0.01	-0.01
1884	-0.63	-0.41	-0.63	-0.41	0	0
1885	-0.52	-0.46	-0.54	-0.46	-0.02	0
1886	-0.29	-0.39	-0.28	-0.39	0.01	0
1887	-0.2	-0.21	-0.17	-0.21	0.03	0
1888	-0.33	-0.07	-0.32	-0.06	0.01	0.01
1889	0.28	-0.05	0.28	-0.04	0	0.01
1890	0.18	-0.11	0.2	-0.11	0.02	0
1891	-0.2	-0.19	-0.2	-0.19	0	0
1892	-0.5	-0.22	-0.51	-0.21	-0.01	0.01
1893	-0.73	-0.39	-0.72	-0.38	0.01	0.01
1894	0.16	-0.31	0.17	-0.3	0.01	0.01
1895	-0.65	-0.23	-0.66	-0.22	-0.01	0.01
1896	0.17	-0.11	0.19	-0.1	0.02	0.01
1897	-0.08	-0.22	-0.08	-0.22	0	0
1898	-0.14	0.02	-0.15	0.03	-0.01	0.01
1899	-0.41	0	-0.41	0	0	0
1900	0.57	-0.01	0.57	-0.01	0	0
1901	0.05	-0.11	0.05	-0.11	0	0
1902	-0.13	-0.13	-0.13	-0.13	0	0
1903	-0.64	-0.33	-0.65	-0.34	-0.01	-0.01
1904	-0.48	-0.35	-0.48	-0.35	0	0
1905	-0.46	-0.37	-0.47	-0.37	-0.01	0
1906	-0.01	-0.21	-0.02	-0.21	-0.01	0
1907	-0.25	-0.17	-0.24	-0.17	0.01	0
1908	0.14	-0.03	0.14	-0.02	0	0.01
1909	-0.28	0.01	-0.27	0.02	0.01	0.01
1910	0.27	-0.11	0.28	-0.11	0.01	0
1911	0.15	-0.15	0.17	-0.15	0.02	0
1912	-0.87	-0.08	-0.88	-0.08	-0.01	0
1913	-0.04	-0.16	-0.03	-0.16	0.01	0
1914	0.08	-0.3	0.09	-0.29	0.01	0.01
1915	-0.13	-0.33	-0.15	-0.33	-0.02	0
1916	-0.52	-0.31	-0.5	-0.31	0.02	0
1917	-1.06	-0.35	-1.06	-0.35	0	0
1918	0.06	-0.41	0.06	-0.4	0	0.01
1919	-0.11	-0.08	-0.1	-0.07	0.01	0.01
1920	-0.41	0.17	-0.41	0.17	0	0
1921	1.12	0.14	1.15	0.15	0.03	0.01
1922	0.17	0.02	0.18	0.02	0.01	0
1923	-0.07	0.17	-0.07	0.17	0	0
1924	-0.73	-0.05	-0.74	-0.05	-0.01	0
1925	0.36	-0.05	0.36	-0.05	0	0
1926	0.04	-0.02	0.04	-0.02	0	0
1927	0.14	0.01	0.15	0.01	0.01	0
1928	0.08	-0.03	0.07	-0.03	-0.01	0
1929	-0.57	0.18	-0.58	0.18	-0.01	0

1930	0.16	0.15	0.16	0.15	0	0
1931	1.08	0.27	1.08	0.27	0	0
1932	0	0.63	0	0.63	0	0
1933	0.66	0.6	0.68	0.61	0.02	0.01
1934	1.23	0.42	1.25	0.44	0.02	0.02
1935	0.03	0.39	0.04	0.41	0.01	0.02
1936	0.18	0.43	0.21	0.45	0.03	0.02
1937	-0.13	0.35	-0.13	0.37	0	0.02
1938	0.85	0.36	0.86	0.36	0.01	0
1939	0.84	0.44	0.85	0.45	0.01	0.01
1940	0.03	0.49	0.03	0.49	0	0
1941	0.62	0.35	0.61	0.35	-0.01	0
1942	0.09	0.21	0.09	0.21	0	0
1943	0.16	0.2	0.17	0.19	0.01	-0.01
1944	0.14	0.21	0.14	0.22	0	0.01
1945	-0.03	0.21	-0.03	0.22	0	0.01
1946	0.7	0.17	0.72	0.17	0.02	0
1947	0.09	0.18	0.1	0.18	0.01	0
1948	-0.08	0.12	-0.08	0.13	0	0.01
1949	0.2	-0.1	0.2	-0.1	0	0
1950	-0.3	-0.05	-0.28	-0.05	0.02	0
1951	-0.42	0.14	-0.42	0.14	0	0
1952	0.32	0.27	0.32	0.27	0	0
1953	0.91	0.32	0.9	0.32	-0.01	0
1954	0.82	0.45	0.85	0.47	0.03	0.02
1955	-0.05	0.42	-0.03	0.43	0.02	0.01
1956	0.27	0.25	0.29	0.26	0.02	0.01
1957	0.14	0.12	0.14	0.13	0	0.01
1958	0.07	0.09	0.06	0.08	-0.01	-0.01
1959	0.17	0.03	0.17	0.02	0	-0.01
1960	-0.23	0	-0.24	-0.01	-0.01	-0.01
1961	0	0.02	-0.02	0.02	-0.02	0
1962	-0.02	-0.03	-0.02	-0.03	0	0
1963	0.19	-0.01	0.19	-0.01	0	0
1964	-0.08	-0.05	-0.07	-0.05	0.01	0
1965	-0.12	-0.07	-0.11	-0.07	0.01	0
1966	-0.24	-0.16	-0.24	-0.16	0	0
1967	-0.1	-0.19	-0.1	-0.19	0	0
1968	-0.28	-0.19	-0.28	-0.19	0	0
1969	-0.23	-0.17	-0.23	-0.16	0	0.01
1970	-0.12	-0.22	-0.11	-0.21	0.01	0.01
1971	-0.1	-0.11	-0.1	-0.11	0	0
1972	-0.36	-0.04	-0.35	-0.03	0.01	0.01
1973	0.25	-0.05	0.24	-0.05	-0.01	0
1974	0.16	-0.08	0.15	-0.08	-0.01	0
1975	-0.19	0.07	-0.2	0.06	-0.01	-0.01
1976	-0.23	-0.08	-0.25	-0.09	-0.02	-0.01
1977	0.37	-0.23	0.37	-0.24	0	-0.01
1978	-0.51	-0.15	-0.52	-0.16	-0.01	-0.01
1979	-0.58	0.03	-0.6	0.02	-0.02	-0.01
1980	0.22	-0.12	0.22	-0.12	0	0
1981	0.65	-0.01	0.64	-0.02	-0.01	-0.01

1982	-0.36	0.11	-0.36	0.1	0	-0.01
1983	0	-0.02	-0.01	-0.03	-0.01	-0.01
1984	0.02	-0.01	0	-0.01	-0.02	0
1985	-0.42	0.24	-0.42	0.22	0	-0.02
1986	0.73	0.3	0.73	0.29	0	-0.01
1987	0.85	0.26	0.83	0.25	-0.02	-0.01
1988	0.34	0.52	0.32	0.51	-0.02	-0.01
1989	-0.18	0.52	-0.19	0.5	-0.01	-0.02
1990	0.88	0.41	0.87	0.4	-0.01	-0.01
1991	0.7	0.26	0.69	0.25	-0.01	-0.01
1992	0.31	0.39	0.3	0.38	-0.01	-0.01
1993	-0.43	0.28	-0.44	0.27	-0.01	-0.01
1994	0.47	0.11	0.46	0.1	-0.01	-0.01
1995	0.35	0.06	0.34	0.05	-0.01	-0.01
1996	-0.17	0.39	-0.17	0.38	0	-0.01
1997	0.05	0.48	0.03	0.47	-0.02	-0.01
1998	1.24	0.54	1.23	0.51	-0.01	-0.03
1999	0.94	0.76	0.93	0.69	-0.01	-0.07
2000	0.65	0.88	0.52	0.79	-0.13	-0.09
2001	0.9	0.76	0.76	0.65	-0.14	-0.11
2002	0.68	0.69	0.53	0.55	-0.15	-0.14
2003	0.65	0.73	0.5	0.58	-0.15	-0.15
2004	0.6	0.8	0.44	0.66	-0.16	-0.14
2005	0.85		0.69		-0.16	
2006	1.23		1.13		-0.1	


Dataset Versions
August 1, 2007
August 10, 2007


Adjustment from August 1st to August 10th

Subject: Temperature change analysis
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 13 Aug 2007 23:34:39 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>

Hi Reto,

Sorry that I didn't communicate clearly what I wanted to see in the new run of the analysis program. Two hings need to be different from what Makiko showed me.

I know that the USHCN/GHCN business must be frustrating!, but...

First we cannot drop the NCDC improvements to the USHCN. There is no way that we can compete with the person-years of effort that they (Tom Karl and all the others at NCDC) put into that, and they are the experts. Also we have published it and we should continue to follow what we have in that (2001) paper. The correction that you made to stations post 2000 records (by setting the means for 1990 to be equal in the two records?) should be fine, and since we have made that available, we should use that. We don't want still another result, which would really set the pundits happy.

Second, what I want to see is how our new result compares with what we get if we make none of the changes in the table of changes, i.e., do not pick and choose any corrections (such as St. Helena) as being "obviously correct".

Jim

Subject: Re: FW: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 02:52:28 -0400
To: "Donald Anderson" <donald.anderson-1@nasa.gov>, "Jack Kaye" <jack.a.kaye@nasa.gov>
CC: "Leslie McCarthy" <lnolan@giss.nasa.gov>

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On 8/13/07, **Donald Anderson** <donald.anderson-1@nasa.gov> wrote:

> Jim:
> FYI
> Any comment?
> Don
>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)

Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

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From: "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <hal.maring@nasa.gov>
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" <dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

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And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

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- Yoda, Jedi Master

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Subject: Fwd: FW: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 12:15:05 -0400
To: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>

Demian, I am running to a meeting and may not get back in time for your deadline -- following may help answer your question -- presumably you saw my "Upstairs" note? Jim Hansen

--------- Forwarded message ---------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <donald.anderson-1@nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Leslie McCarthy < lnolan@giss.nasa.gov>

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Subject: Fwd: Fwd: FW: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 13:01:14 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

---------- Forwarded message ----------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Aug 14, 2007 1:00 PM
Subject: Re: Fwd: FW: <no subject>
To: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see in our 2001 paper we found 1934 slightly warmer, by an insignificant hair over, 1998. We still find that result. The flaw affected temperatures only after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication, and other researchers have taken that description, applied it to the raw data and come up with the same results that we get.

Jim

On 8/14/07, **DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:** < dmclean8@bloomberg.net> wrote:

> james, pardon me: i see the records volz was referring to are *global*. the u.s. figures showed 1998 as the warmest year. nevertheless, nasa has indeed newly ranked 1934 as the warmest year. also, i'd be grateful if you could respond to the second question, regarding your algorithm and making it public.
>
> best,
> demian
> ----- Original Message -----
> From: James Hansen < jhansen@giss.nasa.gov>
> At: 8/14 12:15:10
>
> Demian, I am running to a meeting and may not get back in time for your deadline -- following may help answer your question -- presumably you saw my "Upstairs" note? Jim Hansen
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> From: James Hansen <jhansen@giss.nasa.gov>
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>
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> Any comment?
> Don
>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov
>
>
> ------ Forwarded Message
> *From: *"Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov>
> *Date: *Mon, 13 Aug 2007 12:01:06 -0400
> *To: *"Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov >,
> "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov >
> *Cc: *"Kaye, Jack A. (HQ-DK000)" < jack.a.kaye@nasa.gov>, "Brown, Dwayne C.
> (HQ-NB060)" < dwayne.c.brown@nasa.gov>
> *Conversation: *<no subject>
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> Don et al.,
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> I saw this on the NASA news summary today.
>
> *
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To: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>, "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Makiko, Reto, could you please clear this up. Other people keep saying the same thing that Demian does, i.e., that we previously claimed that 1998 was warmer than 1934. Is that right? I am quite sure that our 2001 paper shows 1934 slightly warmer, as we still find. Of course, scientifically this is all nonsense, as the difference of 0.02 is much less than the accuracy, so practically it should be stated as a tie. I know that whenever new stations are added to the record it can change things by small amounts. Did we once find 1998 as warmer??? Jim (I will be away from e-mail for a few hours).

On 8/14/07, **DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:** <dmclean8@bloomberg.net> wrote:

> Thanks, James. I'm not familiar with that paper from 2001. Is it not true, though, that NASA's rankings, as available at:
>
> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
>
> now show 1934 as the hottest year, where 1998 used to hold that position?
>
> thanks,
> demian
> ----- Original Message -----
> From: James Hansen < jhansen@giss.nasa.gov>
> At: 8/14 13:00:38
>
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And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website

Subject: Fwd: Fwd: FW: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 13:28:38 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, " @gmail.com>

--------- Forwarded message ---------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Aug 14, 2007 1:27 PM
Subject: Re: Fwd: FW: <no subject>
To: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>, Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>

Makiko, Reto, could you please clear this up. Other people keep saying the same thing that Demian does, i.e., that we previously claimed that 1998 was warmer than 1934. Is that right? I am quite sure that our 2001 paper shows 1934 slightly warmer, as we still find. Of course, scientifically this is all nonsense, as the difference of 0.02 is much less than the accuracy, so practically it should be stated as a tie. I know that whenever new stations are added to the record it can change things by small amounts. Did we once find 1998 as warmer??? Jim (I will be away from e-mail for a few hours).

On 8/14/07, **DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:** <dmclean8@bloomberg.net> wrote:

> Thanks, James. I'm not familiar with that paper from 2001. Is it not true, though, that NASA's rankings, as available at:
>
> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
>
> now show 1934 as the hottest year, where 1998 used to hold that position?
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These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2000 and later, and only the United States.

The flaw, even when present (in 2000-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.

Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S. (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.

Jim

*The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily

corrected, and it has been corrected.

On 8/13/07, **Donald Anderson** <donald.anderson-1@nasa.gov > wrote:

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov >
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al:,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
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> *Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.*
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> *The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.*
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> *So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.*
>
> *Who is this man who understands American climate data so much better than the National*

Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Subject: Fwd: US temperatures
From: James Hansen <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 14:11:21 -0400
To: rruedy@giss.nasa.gov, makis@giss.nasa.gov

Date: Tue, 14 Aug 2007 14:04:42 -0400
From: "Thomas.R.Karl" <Thomas.R.Karl@noaa.gov>
Subject: US temperatures
To: James Hansen <jhansen@giss.nasa.gov>
User-Agent: Thunderbird 1.5.0.10 (Windows/20070221)

Hi Jim,

I heard that GISS revised the US average temperatures based on the email below:

Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times ≤ http://www.washingtontimes.com/article/20070813/COMMENTARY08/108130024/1012/commentary ≥ (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, "Something rather odd happened the other day. If you go to NASA's Web site and look at the 'U.S. surface air temperature' rankings for the Lower 48 states, you might notice something has changed. Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures. The 'hottest year on record' is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century - 2000, 2002, 2003, 2004 - plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived."

I have attached a short write-up related to NOAA's revised stats for contiguous US temperatures. We would be curious to know what the basis is for your revisions.

Cheers, Tom
--
Dr. Thomas R. Karl, L.H.D.
Director
NOAA's National Climatic Data Center
Veach-Baley Federal Building
151 Patton Avenue
Asheville, NC 28801-5001
Tel: (828) 271-4476
Fax: (828) 271-4246
Thomas.R.Karl@noaa.gov

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USHCN-trends-2-Pager.doc	**Content-Type:** application/msword **Content-Encoding:** base64

National temperature trends: The science behind the calculations

On January 9, 2007 NOAA provided a press release stating that preliminary temperatures for the United States indicated 2006 was warmest year on record. Included in the press release was reference to a new method for correcting biases in observations (Version 2) that had a preliminary rank for 2006 as the 2nd warmest on record. After receipt of additional observations for 2006 temperature statistics were updated on May 1, 2007. The late data changed the rank for 2006 to the 3rd warmest on record for the old method (Version 1) and the rank remained as 2nd warmest for the new data correction method (Version 2).

Why such changes occur is rooted both in the way the observations are processed for quality and the delay in receipt of data on paper records from many stations. The observations come from the U.S. Historical Climatology Network (USHCN), a network of 1221 climate observing stations in the continental United States (http://www.ncdc.noaa.gov/oa/climate/research/ushcn/). These data are extensively quality controlled for errors and for small biases that may have occurred through time due to artificial changes at each observing station. These artificial changes include station relocations, different instrumentation, and changes in the landscape surrounding the station (e.g. urbanization, removal or planting of vegetation, etc.). Some of these changes may result in "random" changes to the data. For example, even small station relocations can result in temperature readings that are either slightly cooler or slightly warmer than what would have occurred at the former site. Other changes, such changes in urbanization in the vicinity of the station or changes in observing times can systematically affect temperatures, e.g., add an urban warming bias to the temperature trends. Research has shown that the data from these kinds of changes can be corrected to a large degree based on physical and statistical methods (e.g., see Peterson 2006).

Methods that have been used to correct temperature data is described in more than a dozen peer-reviewed scientific papers by NOAA's National Climatic Data Center (NCDC). A series of data corrections were developed to specifically address potential problems in trend estimation of the rates of warming or cooling in the USHCN. They include:

1. Station moves and instrumentation changes (Karl and Williams 1987, Quayle et al. 1991),
2. changes in observing practices, such as observing time changes (Karl et al. 1986), and
3. urbanization (Karl et al. 1988).

These data correction schemes have been applied to the USHCN to determine temperature trends across the United States up until the end of 2006. Beginning in 2007 improved correction schemes for items 1 and 3 above have been applied to the USHCN observations (Menne and Williams 2005, Menne and Williams 2007). They have been shown to improve our ability to monitor climate change and variations. Because different algorithms were used in making corrections to the station data in 2007 there are small

differences in annual average temperatures between the older corrections (Version 1) and newer Version 2 corrections. These small differences in average temperatures result in minor differences in annual rankings for some years. The new correction scheme has virtually no impact on the long-term temperature trend as annual temperature trends in Version 1 from 1895-2006 were 0.112°F/decade and in Version 2 the trends were 0.110°F/decade.

NOAA continues to work to improve the quality and representativeness of climate data provided to the public and scientific communities. In addition to advanced quality control procedures, these efforts include modernization of the USHCN by installing new, more accurate instrumentation and ensuring proper station siting in the process. In addition by the end of next year NOAA should have in place a U.S. Climate Reference Network, a set of 114 very high quality stations optimized for monitoring climate (http://www.ncdc.noaa.gov/oa/climate/uscrn/). The operation of the US Climate Reference Network will eventually virtually eliminate the need for the types of corrections that have to be applied to data available today. The ongoing modernization of the US Historical Climate Reference Network will enable trends of regional temperature to be estimated with far fewer data corrections.

References

1. Karl, T.R., H.F. Diaz, and G. Kukla, 1988: Urbanization: its detection and effect in the United States climate record, ***J. Climate***, 1, 1099-1123.
2. Karl, T.R., C.N. Williams, Jr., P.J. Young, and W.M. Wendland, 1986: A model to estimate the time of observation bias associated with monthly mean maximum, minimum, and mean temperature for the United States, ***J. Climate Appl. Meteor.***, **25**, 145-160.
3. Karl, T.R., and C.N. Williams Jr., 1987: An approach to adjusting climatological time series for discontinuous inhomogeneities. ***J. Climate Appl. Meteor.***, **26**, 1744-1763.
4. Menne, M.J., and C.N. Williams, Jr., 2005: Detection of undocumented changepoints using multiple test statistics and composite reference series. ***J. Climate***, **18**, 4271-4286.
5. Menne, M.J., and C.N. Williams, Jr., 2007: Homogenization of temperature series via pairwise comparisons. ***J. Climate***, **in review**
6. Peterson, T.C., 2006: Examination of potential biases in air temperature caused by poor station locations, ***Bull. Amer. Meteor. Soc.***, 87, 1073-1080, DOI:10.1175/BAMS-87-8-1073
7. Quayle, R.G., D.R. Easterling, T.R. Karl, and P.Y. Hughes, 1991: Effects of recent thermometer changes in the cooperative station network, ***Bull. Amer. Meteor. Soc.***, 72, 1718-1724.

Subject: Re: Possible story about the temp record
From: James Hansen <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 14:16:12 -0400
To: Robert Cahalan <Robert.F.Cahalan@nasa.gov>
CC: Gavin Schmidt <gschmidt@giss.nasa.gov>, Franco Einaudi <franco.einaudi@nasa.gov>, David Herring <dherring@climate.gsfc.nasa.gov>, rruedy@giss.nasa.gov, makis@giss.nasa.gov

Thanks, Bob, I am writing something -- perhaps it can be used there, or modified to be used there. Jim

At 01:52 PM 8/14/2007, Robert Cahalan wrote:

> Jim,
> Earlier I sent the following to Gavin -- and I realize that these are points you've been repeating for many years, just want to add that EarthObservatory could be helpful to get the word out:
>
> > Yes, I agree that this could be an educational opening for mainstream media.
> >
> > My feeling is we need to lead with some of the faulty claims, and then illustrate that:
> > (1) the data is all freely available and widely used for scientific study;
> > (2) scientists use extensive statistical testing to determine whether observed differences can be ignored as being within the observational uncertainty or natural year-to-year variations;
> > (3) changes of a given magnitude at a station or in a limited area average like the lower 48 contiguous United States, which covers about 2% Earth's surface, are less likely to be significant than a change of similar magnitude in averages over the full surface area of the Earth, which is less affected by many local influences (mention corrections to minimize urban effects too); and
> > (4) changes in individual years, even ones that change the ranking of years, are less likely to be associated with sustained climate change than changes averaged over several successive years. On this last point we might quote the CCSP temperature synthesis and assessment product 1.1, which emphasized this point.
> >
> > Of course these are all basic points that any of us climatologists know, but the public needs reminding, and this brouhaha could give a good opportunity to educate any "fence-sitters" who might be listening...
>
> .Bob.
>
> On Aug 14, 2007, at 12:09 PM, David Herring wrote:
>
> > Thank you for clarifying, Gavin.

Dear Jim,

I know you're extremely busy, but I'm writing to request a little of your time in the near future to interview you for a short feature article on NASA's Earth Observatory that we would like to do about this issue. I'd like a little help in understanding more clearly how you conduct your analyses, what the nature of the "bug" was, and the fix that you put into place.

I have time late today (after 4 p.m.); any time after 11 a.m. tomorrow; any time before 3 p.m. on Thursday; and all day Friday. What could work for you? Also, any background reading material you care to send me / direct me to will help me to come better prepared with questions.

Best regards,

David Herring

At 11:56 AM -0400 8/14/07, Gavin Schmidt wrote:

> If you like, but you need to discuss this with Jim - This is his analysis, and he is the lead author. It actually doesn't have much to do with me at all - I'm just commenting....
>
> gavin
>
> *----------*
> | Gavin Schmidt NASA/Goddard Institute for Space Studies |
> | 2880 Broadway |
> | Tel: (212) 678 5627 New York, NY 10025 |
> | |
> | |
> | gschmidt@giss.nasa.gov http://www.giss.nasa.gov/ ~gavin |
> *----------*
>
> On Tue, 14 Aug 2007, David Herring wrote:
>
> > Hey Gavin,
> >
> > I just left you voicemail, but also wanted to write to explore your availability to speak with me about the GISS temperature record. Bob Cahalan feels, and I agree, that given the recent turn of events it might be a good idea to educate the public

about how these data are gathered, and why it's actually harder to calculate average temperature for, say, the continental U.S. than it is for the whole globe.

Anyway, I can see the rightwing blogosphere is revving up into high gear now and so perhaps a report on NASA's Earth Observatory and seizing this opportunity to inform the public will steal most of the hot air out of their collective balloon, eh?

Please advise me on your availability to bring me up to speed. I think Bob C. would like to join us in that conversation as well.

best regards,

--

David Herring

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

Bob Cahalan, Head | Climate and Radiation Branch
NASA/Goddard Space Flight Center, Greenbelt, MD 20771
robert.f.cahalan@nasa.gov | office: 301-614-5390 - FAX: 301-614-6307
- cell:

Subject: Re: FW: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 14 Aug 2007 02:52:28 -0400
To: "Donald Anderson" <donald.anderson-1@nasa.gov>, "Jack Kaye" <jack.a.kaye@nasa.gov>
CC: "Leslie McCarthy" <lnolan@giss.nasa.gov>

Don,

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CC: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Michael H. Freilich" <michael.h.freilich@nasa.gov>

Jack, I am writing something, with figures, which I will send later today. Here are a few relevant paragraphs for now. Jim

The computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States and only after 2000.

[As explained in the e-mail sent out last week, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

:On 8/14/07, **Jack Kaye** <jack.a.kaye@nasa.gov> wrote:

> Jim - thanks for sending this to me.
>
> We have an action to respond to a Congressional question about this. Can you provide us with a relatively straightforward answer (with some #) that we can transmit? I don't think we need anything extensive or complex, but a relatively brief (but quantitative) "just the facts" summary would help. As a backup, it may be good if we could have some # in case we get asked for more detail (e.g., list of top 20 warm years, time series of global T for last 15 years and also for 1934 +/- 5 years).
>
> Don is on travel, but may be checking e-mail.
>
> Time scale is, of course, asap! - Jack
>
> On 8/14/07 2:52 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:
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> > Don,
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> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov <mailto:Donald.Anderson-1@nasa.gov>
>
> ------ Forwarded Message
> **From:** "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov <mailto:svolz@nasa.gov> >
> **Date:** Mon, 13 Aug 2007 12:01:06 -0400
> **To:** "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
> **Cc:** "Kaye, Jack A. (HQ-DK000)" < jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
> **Conversation:** <no subject>

Subject: <no subject>

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Program Executive, Science Mission Directorate
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"Try not. Do, or do not. There is no try."
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Dr. Jack A. Kaye
Assoc. Director for Research
Earth Science Division
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546

Phone: 202-358-2559
Fax: 202-358-3172
E-mail: Jack.A.Kaye@nasa.gov

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Date: Wed, 15 Aug 2007 02:27:01 -0400
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Subject: Re: 1997-2006 vs. 1880-1920 maps
From: "Makiko Sato" <makis@giss.nasa.gov>
Date: Wed, 15 Aug 2007 06:54:51 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

OK. As long as I can get wrong and corrected data in the same format from Reto, I can make these maps easily. As I showed on ~makis/GISSTemp, the corrected ones I get from Reto's web page and the ones I made map data using his old data look very different, and we cannot show them together.

First I thought any data are OK, but I am sure many will compare maps with our web site. So I know it is a lot of work for Reto as usual, but since it is getting more and more a sirious problem (not scientifically at all but politically), I will ask him to put old data on a temporary web site so that I can get the map data using the old data from a web site in exactly the same manner as the new ones.

How soon do you need? I cannot come in Friday.

Makiko

On 8/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> I am now writing a new clear discussion of the whole matter (now that Congress and NASA management are involved). I would like the first figure to be the two figures that you made before (line graph of global T and line graph of U.S. T, showing the original and corrected results). These should be side by side, and thus smaller than before.
>
> The other figure should be maps. I am only interested in land+ocean. By the way I cannot understand your 1934 vs 1998 maps. As you seem to be able to show three maps across very well, we might consider including 1934 and 1998 maps (land plus ocean in both cases). Here is the maps that I think we would like:
> Column 1 "1997-2006 relative to 1880-1920"
> Column 2 "1997-2006 relative to 1951-1980"
> Column 3 "1934 versus 1998"
> Heading for 1st and 2nd maps in top row: Flawed Data
> Heading for 3rd map in top row: 1934 relative to 1951-1980
> Heading for 1st and 2nd maps in 2nd row: Corrected Data
> Heading for 3rd map in 2nd row: 1998 relative to 1951-1980
>
> On second thought, maybe it is better to make the 4 maps that go together as a two-by-two figure, and then make a third figure with four parts 1934, 1998, and the two warmest U.S. years in 2000-2006.
>
> On 8/14/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> > Intried nmy best, but as I explained to you in the msg on your cell, I can't make exactly the same maps woth/wo corrections.
> >
> > Makiko
> >
> > On 8/14/07, James Hansen <jhansen@giss.nasa.gov> wrote:
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> > >
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I made maps from what I can get from the current GISS web page, so it means the most recent corrected data. I can't make these with wrong data so easily, but I am sure I have original data from earlier this year, so if I use them and write some computer program, I should be able to do it. Do you need them today?

Makiko

At 18:41 2007/08/14, you wrote:

> this is great -- I have a very fast internet connection -- these are the numbers with the corrected 2000-2007? Can you also make the maps for the wrong data, so that we can show even with the error it does not make a huge qualitative difference?
>
> On 8/14/07, Makiko Sato <<mailto:makis@giss.nasa.gov> makis@giss.nasa.gov> wrote:
> Jim,
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> I put the maps at the top of
> <
> http://www.giss.nasa.gov/~makis/GISS_Temp/
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>
> .
>
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Subject: Re: Recent events
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 10:12:05 -0400
To: "Phil Jones" <p.jones@uea.ac.uk>
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, d.lister@uea.ac.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Hi Phil,

Thanks, this is very helpful. Glad that you are keeping on top of these things -- we can only give a small fraction of our time to this topic, so it is good that someone keeps on top of it. By the time you are ready to retire global warming may be large enough that it doesn't require that level of expertise and detail. I am especially interested in your comments about NOAA SSTs -- they seemed just a hair cool to me.

Jim

On 8/15/07, **Phil Jones** <p.jones@uea.ac.uk> wrote:

> Jim, Gavin,
> Your recent finding of NCDC/GHCN not continuing to adjust
> records in real time
> and its impacts on blog sites, has alerted me to inform you of a few things
> we've been doing over the past year. Don't pass any of this on via
> Real Climate
> or whatever. Eventually, we will get around to documenting all
> we've been doing.
>
> 1. You may have noticed that Canada has changed loads of its WMO IDs. We've
> been in contact with Lucie Vincent there who's also been doing some
> homogeneity work
> (which is good by the way). As a result of this we are applying
> adjustments in
> real time to about 40 stations (mainly in the east of the country)
> in order to use
> her long adjusted series. Why she adjusted records to an earlier
> period still isn't
> clear to me. We are also getting on top of their station number
> changes, which
> appear related to automation - and giving the new AWSs a new number.
>
> By the way the AES web site enables you to get their real time
> data, but there is
> no mention there of another page which gives the homogeneous series!
>
> This is all less important with your method of combination. Ours requires
> normals.
>
> 2. We're getting all Australian data in real time direct from the

National Climate Centre
in Melbourne.

3. We've got all the long NZ series they have homogenized.

Problems with both Australia and NZ associating these with WMO IDs we had.

Why it's always the English speaking countries is odd? Maybe this is because we can find out/understand more easily what they're doing!

4. My biggest worry is China. CMA don't measure at airports, and they keep moving suburban locations a few more miles out as the cities expand. I was there a month ago to give some talks. I've sent them all the CRU data for China, in the hope that they will reciprocate at some point and send me their adjusted data (for site moves, but not urban influences).
They are doing
some reasonable work, but not seeing the big picture...

Other issues:

1. I reviewed a paper by NCDC (Smith/Reynolds/Peterson) recently. It was OK, but when it comes out it will raise the whole debate again. SSTs are being increasingly measured by buoys (drifting and fixed) and they now dominate over the ships. It seems they are about 0.1-0.2C cooler over the ships. So NCDC will be increasing global temps from about 2000 onwards.

2. SSTs are now coming in for the areas losing Arctic sea ice. The normals we have for these are -1.8C which is completely wrong. Shortish time series are composed of entirely positive anomalies. Maybe this is true, but it probably shouldn't be as much as it is. This problem will get worse as the sea ice continues to go. Your use of land only data shouldn't have the problem.

The SST issues highlight that it is the biases (bucket/intakes and urbanization)
that are important as they are potentially pervasive. Individual station homogeneity issues cancel as sites are all affected differently. Getting this right has hardly any effect (none in fact) on the large-scale averages. Might affect smaller regions, and it's good to get as many right as possible, as the deniers will claim if one is wrong the whole lot is wrong. The law of large numbers seems to be totally forgotten by those collecting pictures of sitings across the US. Still it gives them something to do...

Cheers
Phil

Prof. Phil Jones
Climatic Research Unit Telephone +44 (0) 1603 592090
School of Environmental Sciences Fax +44 (0) 1603 507784
University of East Anglia
Norwich Email p.jones@uea.ac.uk
NR4 7TJ
UK

Subject: Re: 1997-2006 vs. 1880-1920 maps
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 10:24:08 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

I intend to finish writing a discussion today. Assuming that I succeed at that, if we can't make maps for the uncorrected data, we will get along without that. The Washington Post did a good job with their story -- good thing that I took their call. The Washington Times is a political rag. Jim

On 8/15/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> OK. As long as I can get wrong and corrected data in the same format
> from Reto, I can make these maps easily. As I showed on
> ~makis/GISSTemp, the corrected ones I get from Reto's web page and the
> ones I made map data using his old data look very different, and we
> cannot show them together.
>
> First I thought any data are OK, but I am sure many will compare maps
> with our web site. So I know it is a lot of work for Reto as usual,
> but since it is getting more and more a sirious problem (not
> scientifically at all but politically), I will ask him to put old data
> on a temporary web site so that I can get the map data using the old
> data from a web site in exactly the same manner as the new ones.
>
> How soon do you need? I cannot come in Friday.
>
> Makiko
>
> On 8/15/07, James Hansen <jhansen@giss.nasa.gov > wrote:
> > I am now writing a new clear discussion of the whole matter (now that
> > Congress and NASA management are involved). I would like the first figure
> > to be the two figures that you made before (line graph of global T and line
> > graph of U.S. T, showing the original and corrected results). These should
> > be side by side, and thus smaller than before.
> >
> > The other figure should be maps. I am only interested in land+ocean. By
> > the way I cannot understand your 1934 vs 1998 maps. As you seem to be able
> > to show three maps across very well, we might consider including 1934 and
> > 1998 maps (land plus ocean in both cases). Here is the maps that I think we
> > would like:
> > Column 1 "1997-2006 relative to 1880-1920"
> > Column 2 "1997-2006 relative to 1951-1980"
> > Column 3 "1934 versus 1998"
> > Heading for 1st and 2nd maps in top row: Flawed Data
> > Heading for 3rd map in top row: 1934 relative to 1951-1980
> > Heading for 1st and 2nd maps in 2nd row: Corrected Data
> > Heading for 3rd map in 2nd row: 1998 relative to 1951-1980
> >
> > On second thought, maybe it is better to make the 4 maps that go together as

> a two-by-two figure, and then make a third figure with four parts 1934,
> 1998, and the two warmest U.S. years in 2000-2006.
>
> On 8/14/07, Makiko Sato < makis@giss.nasa.gov> wrote:
> > Intried nmy best, but as I explained to you in the msg on your cell, I
> > can't make exactly the same maps woth/wo corrections.
> >
> > Makiko
> >
> > On 8/14/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> > > No, no rush - Jim
> > >
> > > On 8/14/07, Makiko Sato < makis@giss.nasa.gov> wrote:
> > > > Sorry for late reply. Reto was here and told me he was working for
> > > > what you told him this morning, but then the disk got full, he had to
> > > > ask Ken Bell to scratch some old stuff, etc.
> > > >
> > > > I made maps from what I can get from the current GISS web page, so it
> > > > means the most recent corrected data. I can't make these with wrong
> > > > data so easily, but I am sure I have original data from earlier this
> > > > year, so if I use them and write some computer program, I should be
> > > > able to do it. Do you need them today?
> > > >
> > > > Makiko
> > > >
> > > > At 18:41 2007/08/14, you wrote:
> > > > >this is great -- I have a very fast internet connection -- these are
> > > > >the numbers with the corrected 2000-2007? Can you also make the
> > > > >maps for the wrong data, so that we can show even with the error it
> > > > >does not make a huge qualitative difference?
> > > > >
> > > > >On 8/14/07, Makiko Sato
> > > > ><<mailto:makis@giss.nasa.gov> makis@giss.nasa.gov> wrote:
> > > > >Jim,
> > > > >
> > > > >I put the maps at the top of
> > > > ><
> > > > http://www.giss.nasa.gov/~makis/GISS_Temp/
> > >http://www.giss.nasa.gov/~makis/GISS_Temp/
> > > > >.
> > > > >
> > > > >Makiko
> > > > >
> > > >
> > > >
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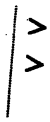
> > >
> > >
> >
> >

: 1997-2006 vs. 1880-1920 maps



Subject: Usufruct and the Gorilla
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 13:44:13 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Maybe you should read the first part of this story to make sure there are no errors.

Robert, if you get this e-mail: would you be available later today to put this story (to be in an e-mail) on the Columbia web site? Or can you give directions for someone else to do that?

Jim

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces a global temperature map at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States (by just over a tenth of a degree) and only after 2000. We made the adjustment to the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, one improvement made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they are seeking to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a much more important

matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that crucial matter, I need to make clear how the deceit of the little fish works, to expose their sham.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead choose to discuss the ranking of temperature in different years. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the Untied States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking is commonly different than that obtained in the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups.

Subject: Re: FW: Per our Discussion - Note for Web Site
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 14:42:45 -0400
To: lesgiss@verizon.net
CC: ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

This seems fine to me. Reto or Makiko may want to comment. Jim

On 8/15/07, **lesgiss@verizon.net** <lesgiss@verizon.net> wrote:

Hi Jim:

This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and submitted to Jack Kaye....is this okay with you?

Thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 14:24:47 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: FW: Per our Discussion - Note for Web Site

How does this look to you?

> _____
> From: Thompson, Tabatha (HQ-NB000)
> Sent: Wednesday, August 15, 2007 11:57 AM
> To: Kaye, Jack A. (HQ-DK000)
> Subject: Per our Discussion - Note for Web Site
>
> Jack,
> Per our discussion, please review the following statement. Once I hear
> from you, I'll send it to our web people.
> ttt
> Researchers at NASA's Goddard Institute for Space Studies in New York
> recently revised information on their global temperature record based
> on corrected data. The computer modeling program that generated the
> temperature record was produced with the assumption that data from
> monitoring stations would be adjusted to account for changes such as
> the time of day at which measurements were made. However, the adjusted
> data were not always readily available and the program used data from
> monitoring stations that had not been adjusted. The result was a
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> corrected the computer program and posted their revised data. More
> information is available here: (LINK TO GISS SITE).
>
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Subject: Re: FW: Per our Discussion - Note for Web Site
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 16:42:32 -0400
To: lesgiss@verizon.net
CC: rruedy@giss.nasa.gov, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov

there must be something wrong with the second sentence -- please reread it Reto. Jim

On 8/15/07, **lesgiss@verizon.net** <lesgiss@verizon.net> wrote:

> Thanks, Reto.
>
> I spoke with Tabatha again..she said Jack Kaye suggested adding the details that the changes were to US stations only, and only post-2000...
>
> Jim--if Reto's revisions, and Jack's are okay, please let me know.
>
> Leslie
> Original Message:
> ---
> From: Reto Ruedy rruedy@giss.nasa.gov
> Date: Wed, 15 Aug 2007 15:24:29 -0400
> To: jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov , robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site
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> Reto
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>
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> From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
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> To: leslie.m.mccarthy@nasa.gov
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> > Sent: Wednesday, August 15, 2007 11:57 AM
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>
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>

> mail2web - Check your email from the web at
> http://link.mail2web.com/mail2web
>
>
>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 18:45:12 -0400
To: rruedy@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>, "James Hansen" <jhansen@giss.nasa.gov>
CC: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

Here is my suggestion:

The flawed program appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, the program reverted to unadjusted data for subsequent years. The result was...

Jim

On 8/15/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Not sure about punctuation, but I added a "," before "as it was supposed to" - seems to improve legibility.
>
> Reto
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> -------- Forwarded Message --------
> From: Reto Ruedy <rruedy@giss.nasa.gov>
> Reply-To: rruedy@giss.nasa.gov
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov , robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site
> Date: Wed, 15 Aug 2007 17:46:00 -0400
>
> It becomes clearer if we split that sentence into 2 sentences:
>
> The flawed program replaced for some US stations the 1880-1999 record by records adjusted for instrumentation and procedural changes, as it was supposed to. However, it used the original source for the years after 1999 without modifying them to fit the adjusted data. The result was ...
>
> Sorry for the long complicated sentence,
> Hope that makes it better.
>
> Reto
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> ---
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> http://link.mail2web.com/Business/SharePoint
>
>
>
>
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 15 Aug 2007 21:53:41 -0400
To: rruedy@giss.nasa.gov
CC: "Makiko Sato" <makis@giss.nasa.gov>, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

yes, those are fine

On 8/15/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> This sounds much better but I think we should add:
>
> "for the period 1880-1999"
>
> at the end of the 1st sentence
>
> and
>
> "when the adjusted data ended"
>
> at the end of the 2nd sentence or something like that.
>
> Reto
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> > Original Message:
> > ----------
> > From: Reto Ruedy rruedy@giss.nasa.gov
> > Date: Wed, 15 Aug 2007 15:24:29 -0400
> > To: jhansen@giss.nasa.gov, lesgiss@verizon.net,
> > ltravis@giss.nasa.gov,
> > robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note for Web
> Site

> > >
> > >
> > > Here is my suggested revision:
> > >
> > > Researchers at NASA's Goddard Institute for Space Studies in
> > > New York
> > > recently revised information on their global temperature
> > > record based on
> > > corrected data. The program that replaced for some US stations
> > > the
> > > 1880-1999 record by records that were adjusted for
> > > instrumentation and
> > > procedural changes, used the original source for the later
> > > years without
> > > modifying them to fit the adjusted data. The result was a
> > > discontinuity
> > > in year 2000 for the US stations involved. Since the necessary
> > > adjustment was positive for about half the stations and
> > > negative for the
> > > other half, the effect on US means was a discontinuity of
> > > +.15C, and
> > > of .003C for the global mean series. The researchers ...
> > >
> > > Reto
> > >
> > > On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:
> > > > This seems fine to me. Reto or Makiko may want to
> > > comment. Jim
> > > >
> > > > On 8/15/07, lesgiss@verizon.net
> > > <lesgiss@verizon.net > wrote:
> > > > Hi Jim:
> > > >
> > > > This is the draft statement prepared by Tabatha
> > > Thompson, of
> > > > HQ PAO, and
> > > > submitted to Jack Kaye....is this okay with you?

> > >
> > > Thanks.
> > >
> > > Leslie
> > >
> > >
> > > Original Message:
> > > ----------
> > > From: Thompson, Tabatha (HQ-NB000)
> > Tabatha.Thompson-1@nasa.gov
> > > Date: Wed, 15 Aug 2007 14:24:47 -0400
> > > To: leslie.m.mccarthy@nasa.gov
> > > Subject: FW: Per our Discussion - Note for
> Web Site
> > >
> > >
> > > How does this look to you?
> > >
> > > >
> > _____
> > > > From: Thompson, Tabatha
> (HQ-NB000)
> > > > Sent: Wednesday, August 15, 2007 11:57
> AM
> > > > To: Kaye, Jack A. (HQ-DK000)
> > > > Subject: Per our Discussion - Note
> for Web
> > Site
> > > > >
> > > > Jack,
> > > > Per our discussion, please review the
> following
> > statement.
> > > > Once I hear
> > > > from you, I'll send it to our web
> people.
> > > > ttt
> > > > Researchers at NASA's Goddard Institute
> for Space
> > Studies in
> > > > New York
> > > > recently revised information on their
> global
> > temperature
> > > > record based
> > > > on corrected data. The computer modeling
> program
> > that
> > > > generated the

> > > > temperature record was produced with the
> > assumption that
> > > data from
> > > > monitoring stations would be adjusted to
> account
> > for changes
> > > such as
> > > > the time of day at which measurements
> were made.
> > However,
> > > the adjusted
> > > > data were not always readily available
> and the
> > program used
> > > data from
> > > > monitoring stations that had not been
> adjusted.
> > The result
> > > was a
> > > > discontinuity in temperature variance in
> 2000. The
> > > researchers have
> > > > corrected the computer program and
> posted their
> > revised
> > > data. More
> > > > information is available here: (LINK TO
> GISS
> > SITE).
> > > > >
> > > > >
> > > >
> > > >
> > > >
> > >
> ---
> > > > mail2web - Check your email from the web
> at
> > > > http://link.mail2web.com/mail2web
> > > >
> > > >
> > > >
> > > >
> > > --
> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >
> > >
> ---
> > > mail2web.com – What can On Demand Business Solutions

> do for
> > you?
> > http://link.mail2web.com/Business/SharePoint
> >
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The Real Deal: Usufruct & the Gorilla

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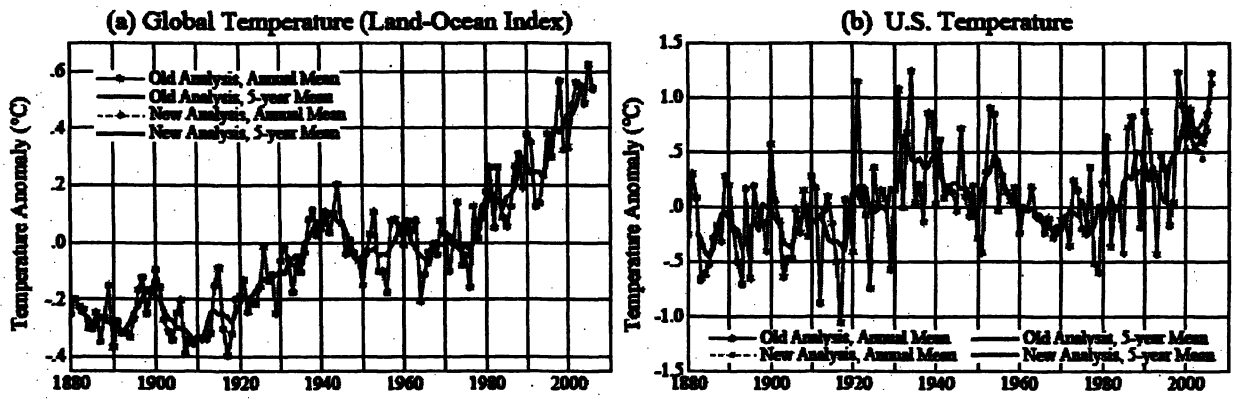

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

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The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

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Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be a relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

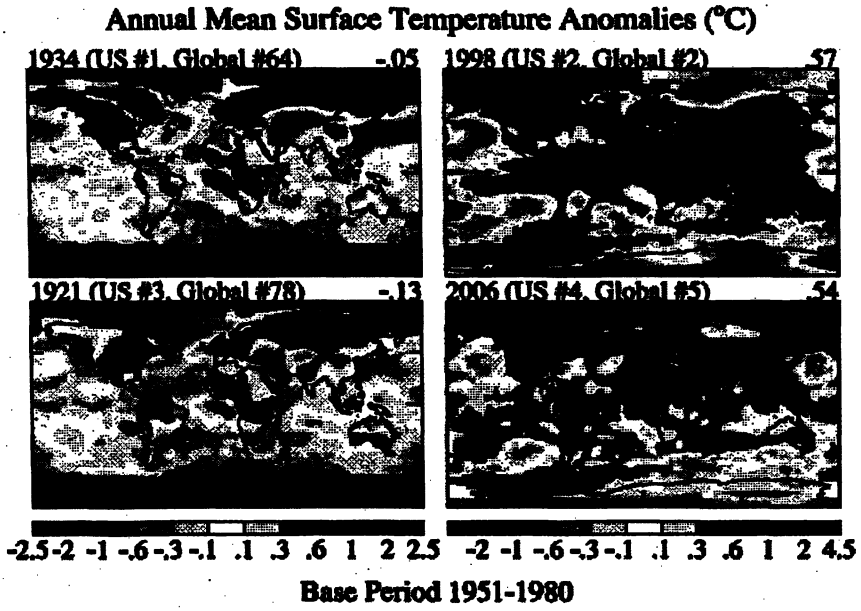

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

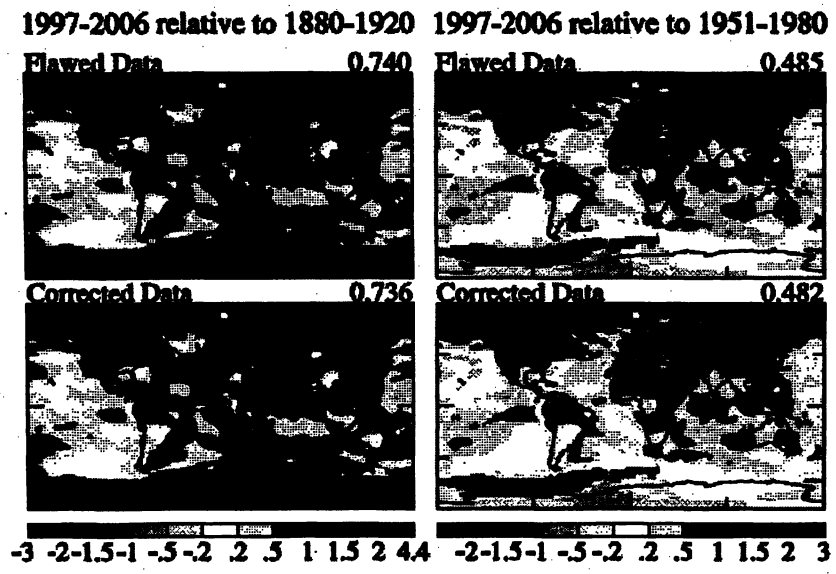

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
"Dangerous" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf
"Trace Gases" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf

Implications of this rapid and growing global climate change are discussed in "The 800 Pound Gorilla: The Threat and Taming of Global Climate Change",
"Gorilla" http://www.giss.nasa.gov/~jhansen/preprints/
"Gorilla" is adapted from "The Threat to the Planet" (13 July 2006 New York Rev. Books) with assistance of Walter Simpson. "Gorilla" includes sidebars on 'Likely Consequences of Global Climate Change' and 'Three Policies Needed to Defuse the Global Warming Time Bomb'.

Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the 'royalty' controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs in fossil fuel companies such as EXXON/Mobil, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', then usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the Earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve Creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now". We can't take both positions. We need to make up our mind. Do we care?

I am puzzled by views expressed by some conservatives, views usually expressed in vehement unpleasant ways in e-mails that I have been bombarded by in the past several days. It is a bit disconcerting as I come from a moderately conservative state, and I consider myself a moderate conservative in most ways. It is puzzling, because it seems to me that conservatives should be the first ones standing up for preserving Creation, and for the rights of the young and the unborn. That is the basic intergenerational issue in global warming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

Is it possible that conservatives have been too quick to support the captains of industry? If we allow industry to continue on a path of denial, to focus on their short-term profits, to deny the rights of our children, grandchildren and the unborn, if the planet passes climate tipping points, will we not share in the infamy, the infamy of the captains of industry?

It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course Nature will, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

I am indebted to Jim Wine for schooling me in 'usufruct'.

Criticisms, as always, are welcome.

Subject: Re: Re: Real Deal
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 04:12:02 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

On 8/16/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:
Makiko, thanks, there are about half a dozen urls that I should give, for the primary references, perhaps you could find some of those - although I assume that I can just copy those from the GISS web page. Jim

On 8/15/07, **Makiko Sato** <makis@giss.nasa.gov > wrote:
Jim,

There are some more.

(1) The biggest error I made was that I didn't notice that you had exchanged Fig. 2 and 3.

Others are minor.
(2) Do you want to give the url
http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
after "the e-mail sent last week" in the 3rd paragraph?

(3) Do you really mean "micrometer" not magnifying glass? I thought a micrometer measures thickness of a paper or something, but I am not sure.

(4) "relative hot" or "relatively hot"?

(5) ")" miising after "Dangerous" at the end of a paragraph.

Send me more before I may be able to read it because I

Makiko

On 8/15/07, Makiko Sato < makis@giss.nasa.gov> wrote:
>
> >Date: Wed, 15 Aug 2007 18:51:56 -0400
> >To: "James Hansen" < jhansen@giss.nasa.gov>
> >From: Makiko Sato <makis@giss.nasa.gov>
> >Subject: Re: Real Deal
> >
> >I moved some paragraphs so that figures come either at top or bottom

> >of pages, but I may have missed some lines, so please check
> >carefully. I can change figure sizes easily.
> >
> >Makiko
> >
> >
> >At 18:36 2007/08/15, you wrote:
> >>Makiko, if you put the figures into this version, and if I can
> >>still edit the text, then that should work well. I still have a
> >>few paragraphs to write at the end. Jim
> >>Content-Type: application/msword; name=RealDeal2.doc
> >>X-Attachment-Id: f_f5eeiiji
> >>Content-Disposition: attachment; filename=" RealDeal2.doc"
>
>

RealDeal.16Aug2007.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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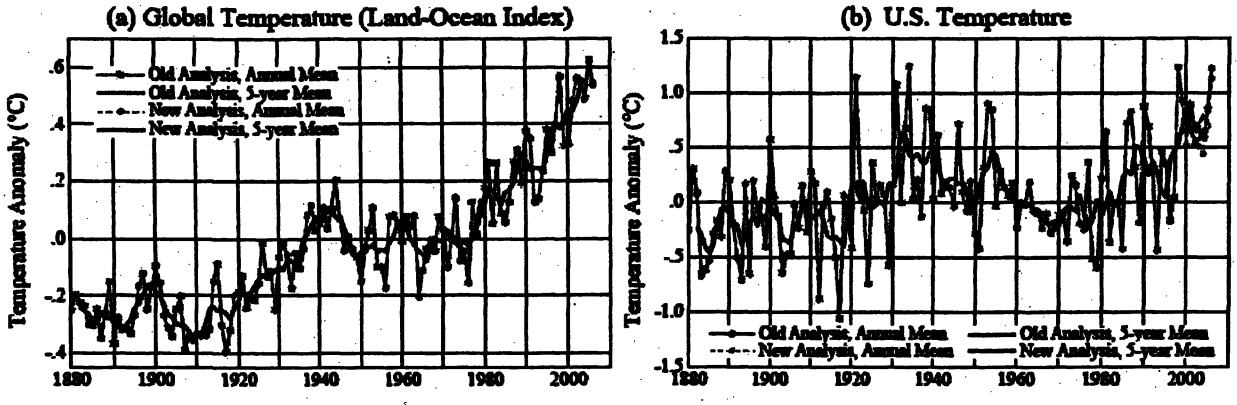

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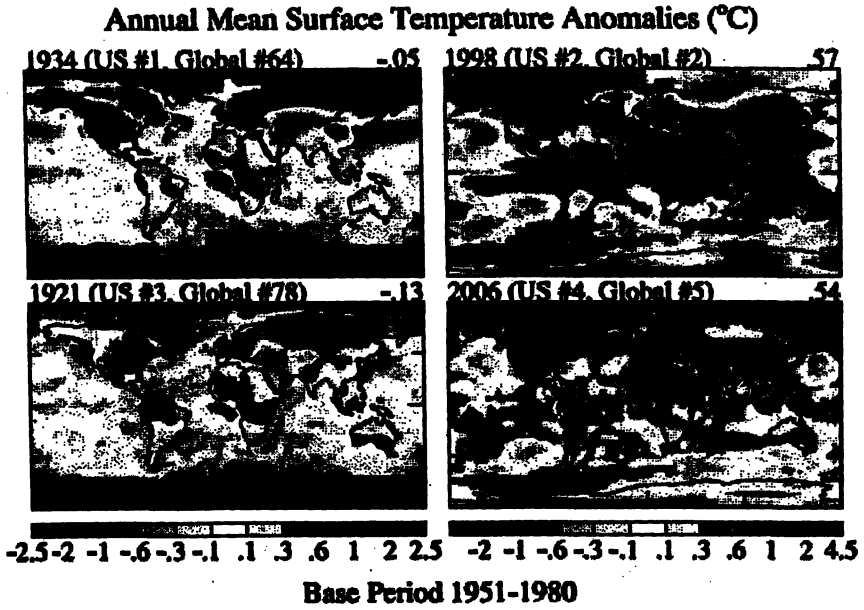

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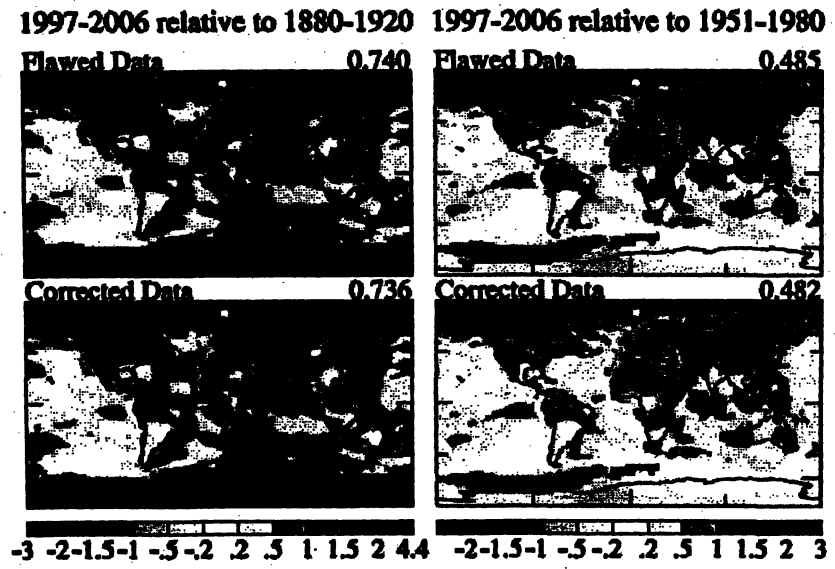

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"Gorilla" is adapted from "The Threat to the Planet" (13 July 2006 New York Rev. Books) with assistance of Walter Simpson. "Gorilla" includes sidebars on 'Likely Consequences of Global Climate Change' and 'Three Policies Needed to Defuse the Global Warming Time Bomb'.

Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the 'royalty' controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs in fossil fuel companies such as EXXON/Mobil, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', then usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the Earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve Creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now". We can't take both positions. We need to make up our mind. Do we care?

I am puzzled by views expressed by some conservatives, views usually expressed in vehement unpleasant ways in e-mails that I have been bombarded by in the past several days. It is a bit disconcerting as I come from a moderately conservative state, and I consider myself a moderate conservative in most ways. It is puzzling, because it seems to me that conservatives should be the first ones standing up for preserving Creation, and for the rights of the young and the unborn. That is the basic intergenerational issue in global warming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

Is it possible that conservatives have been too quick to support the captains of industry? If we allow industry to continue on a path of denial, to focus on their short-term profits, to deny the rights of our children, grandchildren and the unborn, if the planet passes climate tipping points, will we not share in the infamy, the infamy of the captains of industry?

It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course Nature will, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

I am indebted to Jim Wine for schooling me in 'usufruct'.

Criticisms, as always, are welcome.

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:14:09 -0400
To: rruedy@giss.nasa.gov
CC: lesgiss@verizon.net, "Makiko Sato" <makis@giss.nasa.gov>, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

Revised version suggested below. Jim

On 8/16/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> So here is an attempt to put the pieces together; I also adjusted the beginning and end to fit the other modifications; please don't hesitate to further improve my style:
>
> Researchers at NASA's Goddard Institute for Space Studies in New York recently revised their global temperature record after correcting a step in their data acquisition procedure. The prior process appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, it reverted to the unadjusted data after 1999, the last year for which the adjusted data were available. This resulted in a discontinuity in year 2000 for the US stations involved. The adjustments necessary to remove the discontinuity turned out to be positive for about half the stations and negative for the other half. The net effect of the prior flaw was to increase the mean US temperature by about 0.15C and global temperature by about 0.003C, changes that were within the margin of error. The researchers corrected the computer program and posted their revised data on 7 August 2007. More information is available here: (LINK TO GISS SITE).
>
> Reto
>
> On Wed, 2007-08-15 at 21:53 -0400, James Hansen wrote:
> > yes, those are fine
> >
> > On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > This sounds much better but I think we should add:
> >
> > "for the period 1880-1999"
> >
> > at the end of the 1st sentence
> >
> > and
> >
> > "when the adjusted data ended"
> >
> > at the end of the 2nd sentence or something like that.
> >
> > Reto
> >
> > On Wed, 2007-08-15 at 18:45 -0400, James Hansen wrote:

> > Here is my suggestion:
> >
> > The flawed program appropriately replaced some US station records with
> > records adjusted for instrumental and procedural changes. However,
> > the program reverted to unadjusted data for subsequent years. The
> > result was...
> >
> > Jim
> > On 8/15/07, Reto Ruedy < rruedy@giss.nasa.gov> wrote:
> > Not sure about punctuation, but I added a "," before "as it
> > was supposed
> > to" - seems to improve legibility.
> >
> > Reto
> >
> > ------- Forwarded Message -------
> > From: Reto Ruedy < rruedy@giss.nasa.gov>
> > Reply-To: rruedy@giss.nasa.gov
> > To: James Hansen < jhansen@giss.nasa.gov>
> > Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov,
> > makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note for Web Site
> > Date: Wed, 15 Aug 2007 17:46:00 -0400
> >
> > It becomes clearer if we split that sentence into 2
> > sentences:
> >
> > The flawed program replaced for some US stations the 1880-1999
> > record by
> > records adjusted for instrumentation and procedural changes,
> > as it was
> > supposed to. However, it used the original source for the
> > years after
> > 1999 without modifying them to fit the adjusted data. The
> > result was ...
> >
> > Sorry for the long complicated sentence,
>

> > > ! Hope that makes it better.
> > >
> > > Reto
> > >
> > >
> > > On Wed, 2007-08-15 at 16:42 -0400, James Hansen wrote:
> > > > there must be something wrong with the second sentence --
> > > > please
> > > > reread it Reto. Jim
> > > > >
> > > > > On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> > > > > >
> > > > > > Thanks, Reto.
> > > > > >
> > > > > > I spoke with Tabatha again..she said Jack Kaye
> > > > > suggested
> > > > > > adding the details
> > > > > > that the changes were to US stations only, and only
> > > > > > post-2000...
> > > > > >
> > > > > > Jim--if Reto's revisions, and Jack's are okay,
> > > > > please let me
> > > > > > know.
> > > > > >
> > > > > > Leslie
> > > > > > Original Message:
> > > > > > ----------
> > > > > > From: Reto Ruedy rruedy@giss.nasa.gov
> > > > > > Date: Wed, 15 Aug 2007 15:24:29 -0400
> > > > > > To: jhansen@giss.nasa.gov, lesgiss
> > > > > > ltravis@giss.nasa.gov,
> > > > > > robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> > > > > > Subject: Re: FW: Per our Discussion - Note for Web
> > > > > Site
> > > > > >
> > > > > >
> > > > > > ~~Here is my suggested revision:~~
> > > > > >
> > > > > > Researchers at NASA's Goddard Institute

> for Space
> > Studies in
> > > New York
> > > recently revised information on their
> global
> > temperature
> > > record based on
> > > corrected data. The program that replaced
> for some
> > US stations
> > > the
> > > 1880-1999 record by records that were
> adjusted for
> > > instrumentation and
> > > procedural changes, used the original
> source for the
> > later
> > > years without
> > > modifying them to fit the adjusted data.
> The result
> > was a
> > > discontinuity
> > > in year 2000 for the US stations involved.
> Since the
> > necessary
> > > adjustment was positive for about half the
> stations
> > and
> > > negative for the
> > > other half, the effect on US means was a
> > discontinuity of
> > > +.15C, and
> > > of .003C for the global mean series. The
> > researchers ...
> > >
> > > Reto
> > >
> > > On Wed, 2007-08-15 at 14:42 -0400, James
> Hansen
> > wrote:
> > > > This seems fine to me. Reto or Makiko
> may want to
> > > comment. Jim
> > > >
> > > > On 8/15/07, lesgiss@verizon.net
> > <lesgiss@verizon.net> wrote:
> > > > Hi Jim:
> > > >
> > > > This is the draft statement

> prepared by
> > Tabatha
> > > Thompson, of
> > > > HQ PAO, and
> > > > submitted to Jack Kaye....is
> this okay
> > with you?
> > > >
> > > > Thanks.
> > > >
> > > > Leslie
> > > >
> > > >
> > > > Original Message:
> > > > ----------
> > > > From: Thompson, Tabatha
> (HQ-NB000)
> > > Tabatha.Thompson-1@nasa.gov
> > > > Date: Wed, 15 Aug 2007 14:24:47
> -0400
> > > > To: leslie.m.mccarthy@nasa.gov
> > > > Subject: FW: Per our Discussion
> - Note for
> > Web Site
> > > >
> > > >
> > > > How does this look to you?
> > > >
> > > > >
> > ---
> > > > > From: Thompson,
> Tabatha
> > (HQ-NB000)
> > > > > Sent: Wednesday, August 15,
> 2007 11:57
> > AM
> > > > > To: Kaye, Jack A. (HQ-DK000)
> > > > > Subject: Per our
> Discussion - Note
> > for Web
> > > Site
> > > > >
> > > > > Jack,
> > > > > Per our discussion, please
> review the
> > following
> > > statement.
> > > > Once I hear
> > > > > from you, I'll send it to our

> web
> > people.
> > > > > ttt
> > > > > Researchers at NASA's Goddard
> Institute
> > for Space
> > > Studies in
> > > > New York
> > > > > recently revised information
> on their
> > global
> > > temperature
> > > > record based
> > > > > on corrected data. The
> computer modeling
> > program
> > > that
> > > > generated the
> > > > > temperature record was
> produced with the
> > > assumption that
> > > > data from
> > > > > monitoring stations would be
> adjusted to
> > account
> > > for changes
> > > > such as
> > > > > the time of day at which
> measurements
> > were made.
> > > However,
> > > > the adjusted
> > > > > data were not always readily
> available
> > and the
> > > program used
> > > > data from
> > > > > monitoring stations that had
> not been
> > adjusted.
> > > The result
> > > > was a
> > > > > discontinuity in temperature
> variance in
> > 2000. The
> > > > researchers have
> > > > > corrected the computer program
> and
> > posted their

> > > revised
> > > > data. More
> > > > information is available here:
> (LINK TO
> > GISS
> > > SITE).
> > > > > >
> > > > > >
> > > > >
> > > > >
> > > > >
> > > >
> >
> ---
> > > > mail2web - Check your email from
> the web
> > at
> > > >
> http://link.mail2web.com/mail2web
> > > >
> > > >
> > > >
> > > >
> > > --
> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >
> > >
> >
> ---
> > > mail2web.com â€" What can On Demand Business
> Solutions
> > do for
> > > you?
> > >
> http://link.mail2web.com/Business/SharePoint
> > >
> > >
> > >
> > >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
> >
> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Real Deal
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 14:52:01 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Here is a complete draft -- it would be good if someone else read it -- I will read the second half now, the first half having been done pretty carefully. Jim

Subject: Re: Real Deal
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 14:55:15 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

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RealDeal.16Aug2007.doc	**Content-Type:** application/msword **Content-Encoding:** base64

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces global temperatures at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001) http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf The flaw affected temperatures only in the United States (by about 0.15°C) and only in 2000 and later. We corrected the flaw in the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf one improvement made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program presumed that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they

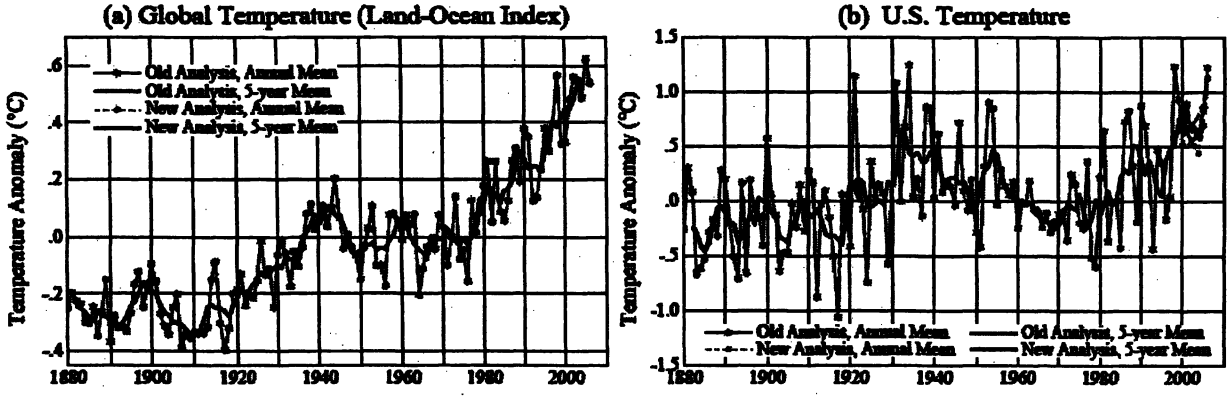

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

seek to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead discuss ranking of temperature in different years, including many false statements. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

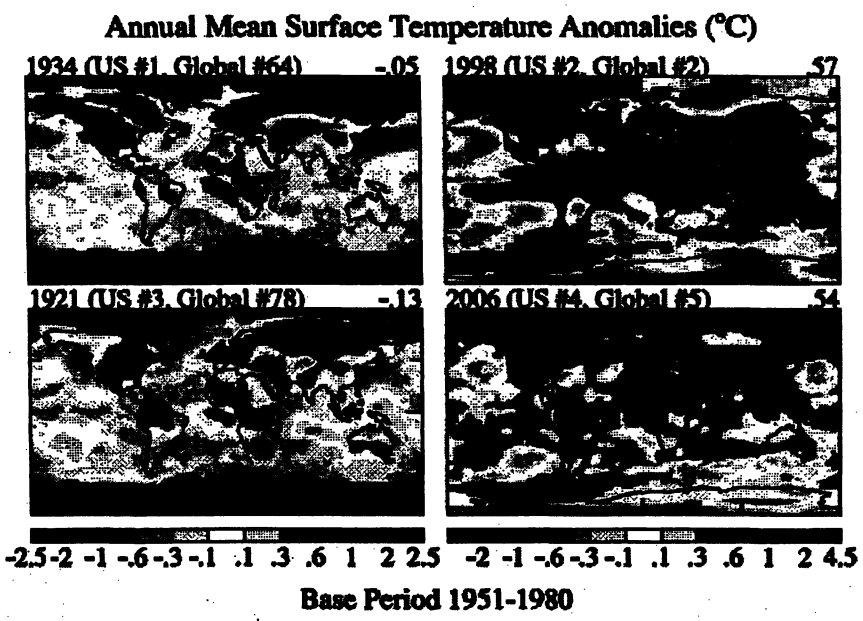

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

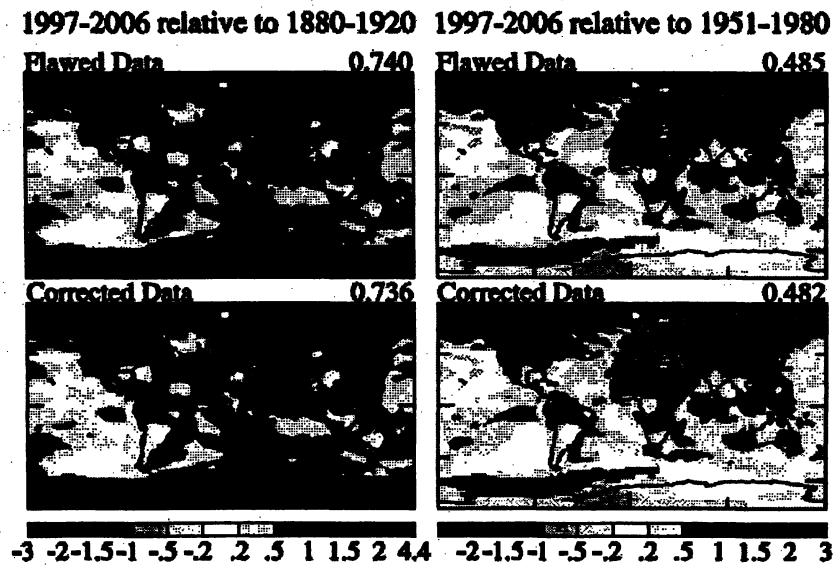

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
"Dangerous" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf
"Trace Gases" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf

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Make no doubt, however, if tipping points are passed, if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

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Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', than usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on the one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

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1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the Earth belongs in usufruct to the living' . . ."

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It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course nature will, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

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Criticisms, as always, are welcome.

Subject: edited version
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 15:10:07 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

I made several edits improvements, included here, while reading the second half. Jim

RealDeal.16Aug2007.doc	**Content-Type:** application/msword **Content-Encoding:** base64

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces global temperatures at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001) http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf The flaw affected temperatures only in the United States (by about 0.15°C) and only in 2000 and later. We corrected the flaw in the program, thanked the fellow who pointed it out, and thought that was the end of it.

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How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they

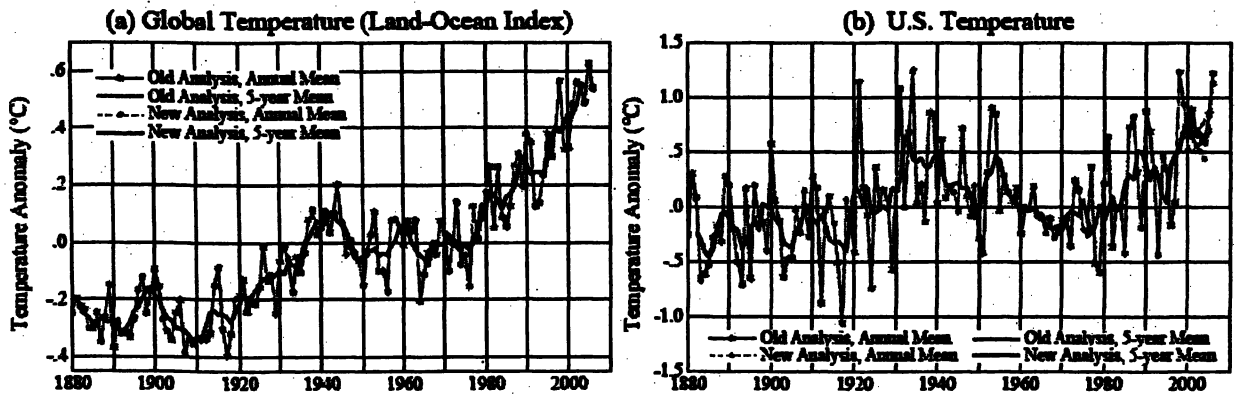

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

seek to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead discuss ranking of temperature in different years, including many false statements. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

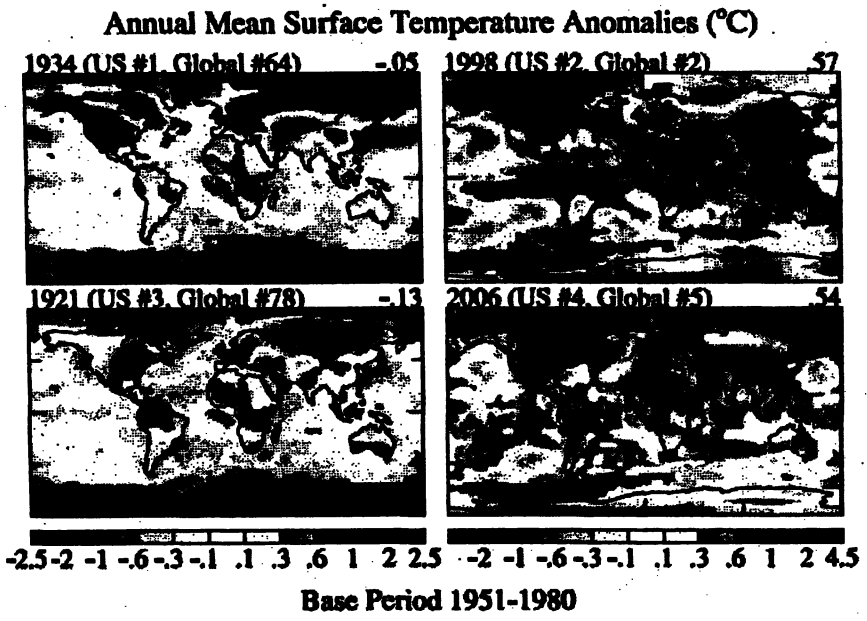

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

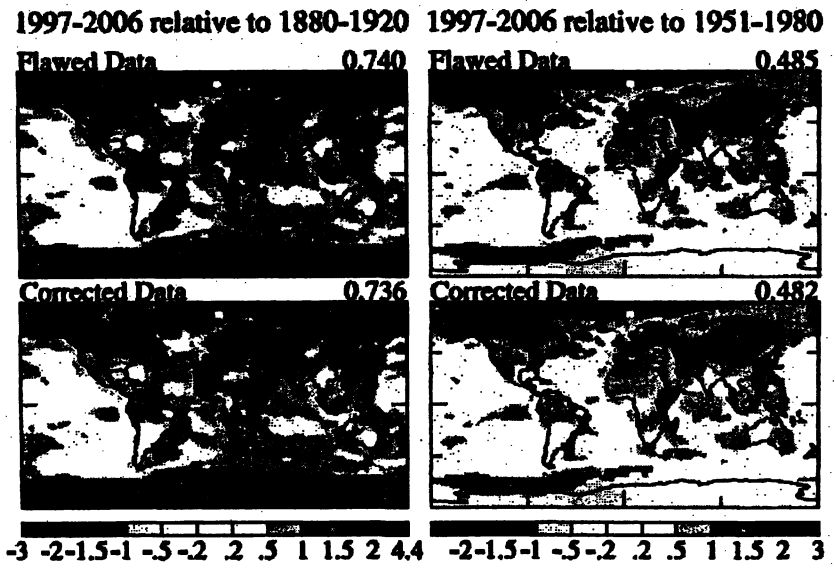

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
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Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the royalty controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs of EXXON/Mobil and fossil fuel leaders, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', than usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on the one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

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From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 15:51:34 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

I read whole thing, made a few edits including Makiko and Darnell comments (except I did not add a period after the URL, because in the past that has caused problems). So, I think that it is ready to go.
Jim

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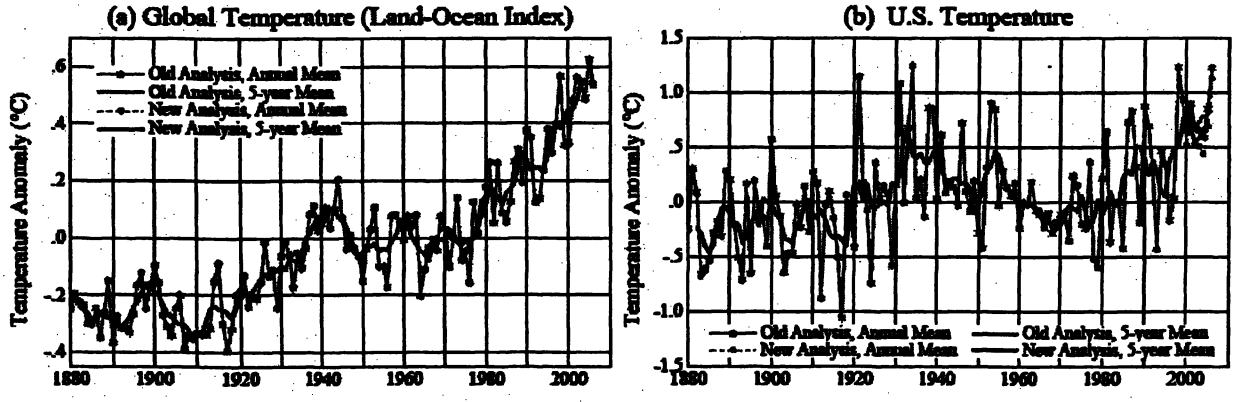

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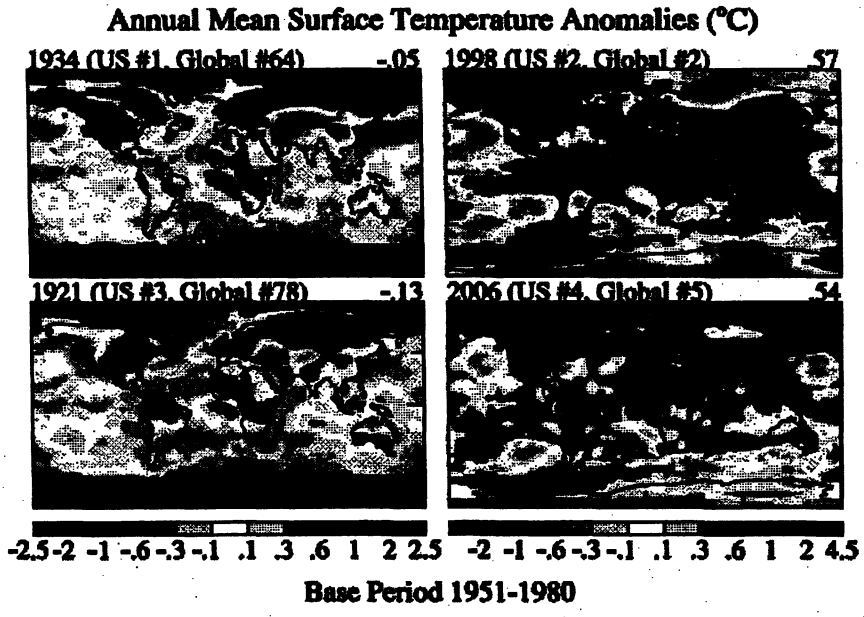

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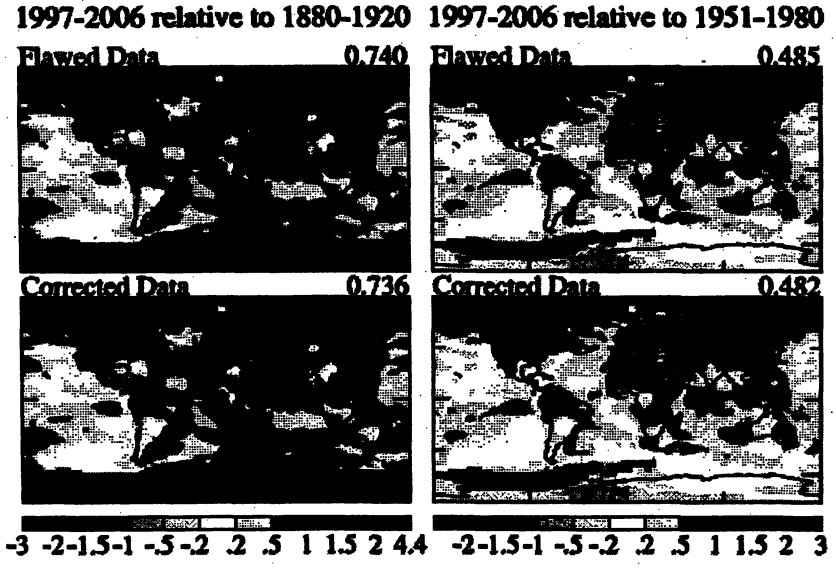

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Bush senior: "American way of life is not negotiable."
The unborn

Do not wish to focus on the

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Will we not share in the infamy, the infamy of the captains of industry?

Do not wish to end on a negative note. As discussed in OKCII

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From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 15:52:59 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Can we put it on the Columbia web site, so that it can be hyperlinked, rather than attaching it to make a bulky e-mail?

On 8/16/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:

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Subject: Final version
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 16:20:59 -0400
To: "Darnell Cain" <dcain@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

RealDeal.16Aug2007.doc	**Content-Type:** application/msword **Content-Encoding:** base64

The Real Deal: Usufruct & the Gorilla

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The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001) http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf The flaw affected temperatures only in the United States (by about 0.15°C) and only in 2000 and later. We corrected the flaw in the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf one improvement made in our 2001 analysis was to use USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program presumed that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCN and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISTEMP web page.]

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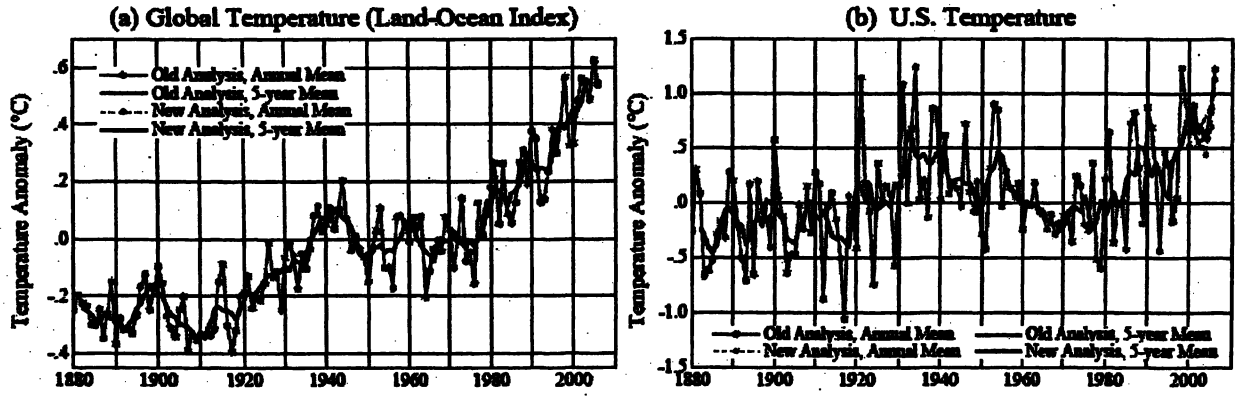

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

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But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

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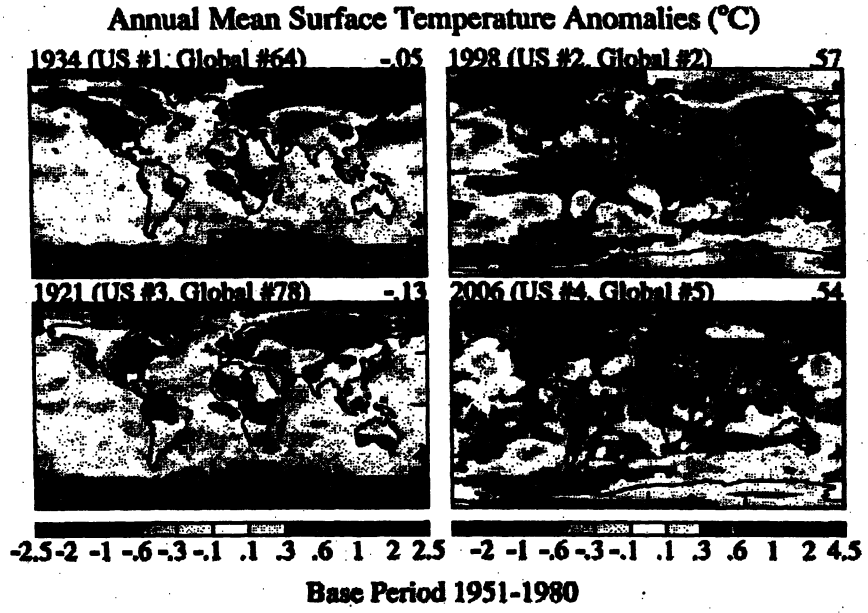

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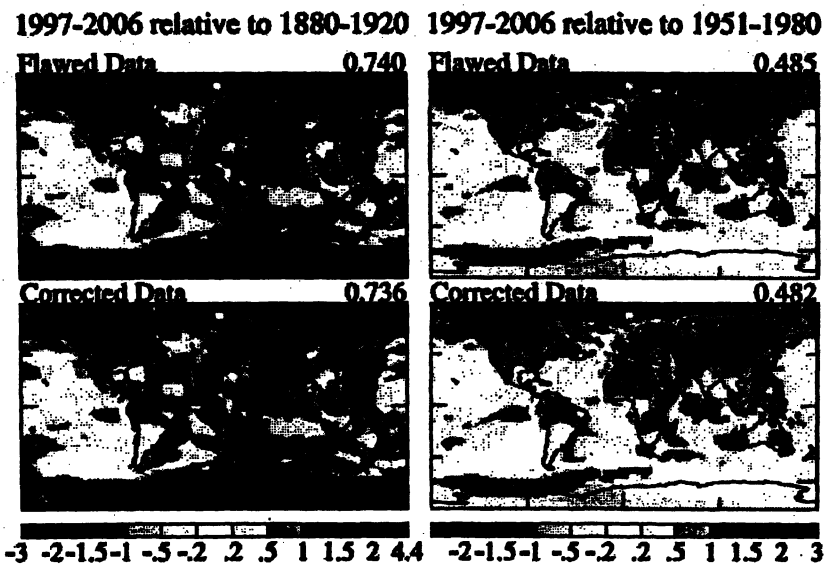

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Make no doubt, however, if tipping points are passed, if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the 'royalty' controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs in fossil fuel companies such as EXXON/Mobil, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', then usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the Earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve Creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now." We can't take both positions. We need to make up our mind. Do we care?

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It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course Nature will, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

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Subject: The Real Deal: Usufruct & the Gorilla
From: James Hansen <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 16:52:42 -0400
To: jhansen@giss.nasa.gov
CC: jhansen@giss.nasa.gov

To be removed from Jim Hansen's Email distribution respond to sender with REMOVE as subject

Discussion of the significance of global temperature change matters is available at
http://www.columbia.edu/~jeh1/realdeal.16aug20074.pdf

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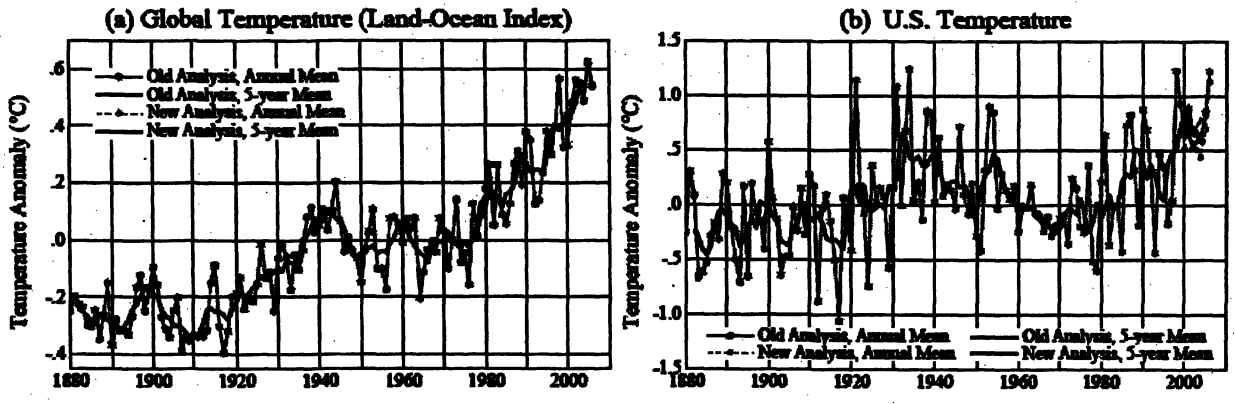

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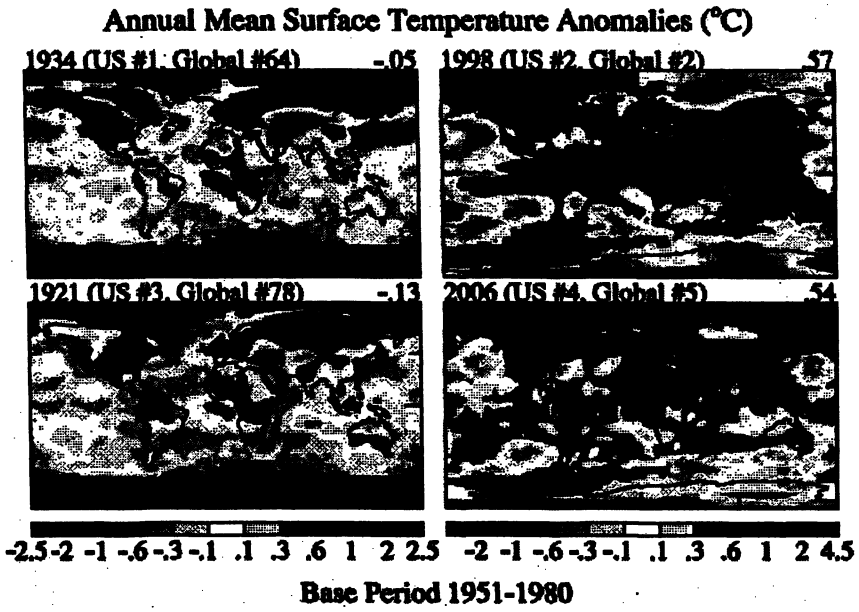

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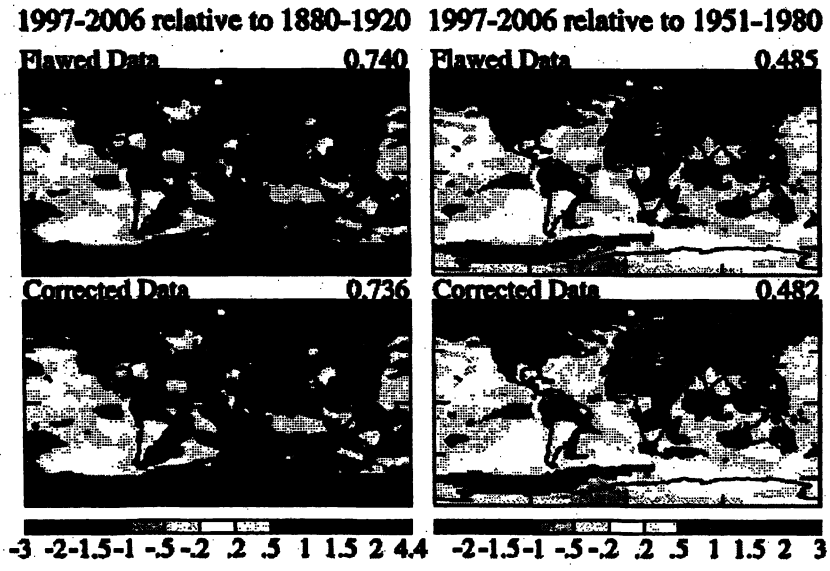

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Date: Thu, 16 Aug 2007 22:05:06 -0400
From: "James Hansen" <jhansen@giss.nasa.gov>
Sender: [redacted]@gmail.com
To: "Zoe Cormier" [redacted]@gmail.com>
Subject: Re: Interview Request: Globe and Mail
Cc: lnolan@giss.nasa.gov
X-Google-Sender-Auth: ed366886ff4624d7

Zoe,
See some comments below
Jim

On 8/16/07, Zoe Cormie [redacted]@gmail.com> wrote:

> Hello Dr Hansen,
>
> I am writing a piece on your paper in the Phil. Trans. R. Soc. A (365) on Climate change and trace gases for The Globe and Mail, Canada's largest daily paper.
>
> I was hoping you might have a few minutes to speak with me tomorrow (Friday the 17th), or Monday the 19th.
>
> I know that you are indeed very busy, but if you have a few minutes to discuss with me:
>
> - why you think the IPCC may have neglected to consider those factors you included in your analysis

By its nature, science is cautious -- science thrives on skepticism -- so in any case it would be hard to get agreement on a topic such as ice sheet stability. But it is much harder for IPCC, because the group is necessarily composed of representatives from many countries, some of which have a natural bias in the matter.

So you cannot blame IPCC for focusing on thermal expansion and alpine glaciers, upon which it is easier to get some agreement. However, I believe that they should have said in very big red letters that they could not address ice sheet disintegration because not enough is known to give an accurate prediction for a process that is surely very non-linear. And they might have said more about the evidence from paleoclimate for ice sheets changing rapidly in the past. There is also the important evidence for what is happening on the ice sheets now, but some of that information is very recent, and because of the cumbersome IPCC review process they exclude recent information. So they are very handicapped. I do not envy them.

> - the reception of your estimates by policy-makers and the IPCC

Policy-makers, at least many of them, are very glad to have input in addition to IPCC, because they recognize the handicaps that IPCC works under.

Some of the IPCC scientists agree with what I have said and written, but there are also a few old soreheads who are upset. Too bad, but it is too important a matter to worry about anyone's feelings.

> and
>
> - what overall message would you like people to get: how bad could things get and what should we be doing right now

If we follow 'business-as-usual' growth of greenhouse gas emissions, I think that we will lock in a guaranteed sea level rise of several meters, which, frankly, means that all hell is going to break loose. With so many people living near sea level it will be hard to deal with so the environmental refugees.

What we should be doing now is taking the steps to get us off the business-as-usual track. As I have written and discussed in congressional testimony, the first step should be a moratorium on new coal-fired power-plants until technology is available to capture and store the CO2. Phase-out of coal except at power plants that capture the CO2 and a gradually rising price on CO2 emissions are the main things that are needed to solve the problem.

> If you can spare five minutes I would be very grateful to speak with you - but I would be happy to speak with one of your co-authors if you are not available.
>
> Thanks and Best
> Zoe Cormier
>
> --
> Zoe Cormier
> Freelance Journalist and Science Writer
> From UK: 07814 297 569
> From North America: 011 44 7814 297 569
> www.zoecormier.com

Subject: Re: response on McIntyre IP claims??
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 17 Aug 2007 10:59:56 -0400
To: "Gavin Schmidt" <gschmidt@giss.nasa.gov>
CC: lesgiss@verizon.net, : @gmail.com, dcain@giss.nasa.gov, rruedy@giss.nasa.gov

I agree that the shortened version is better. What are you going to do with this?

On 16 Aug 2007 17:31:31 -0400, **Gavin Schmidt** <gschmidt@giss.nasa.gov> wrote:

a few suggested edits. I don't advise getting rhetorical so I deleted
the third paragraph.

gavin

On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:
> I agree...but in this case we are in the right. I think we should just
> make the point clear that McIntyre's story is a fabrication in a very
> generic way.
>
> Take a look at it...I'm also sending it to Reto and Gavin as well.
>
> Leslie
>
>
> Original Message:
> ---
> From: James Hansen jhansen@giss.nasa.gov
> Date: Thu, 16 Aug 2007 16:33:28 -0400
> To: lesgiss@verizon.net @gmail.com, dcain@giss.nasa.gov
> Subject: Re: response on McIntyre IP claims??
>
>
> Do we want to lower ourselves to debating with a court jester? Of course,
> that is what he wants.
>
> I don't have a strong preference as long as it is not taking a significant
> amount of my time.
>
> I have not read the stuff that you are referring to, but as I recall, as
> soon as I was told about the matter, I said that he was welcome to the data.
>
> Jim
>
> On 8/16/07, lesgiss@verizon.net < lesgiss@verizon.net> wrote:
> >
> > Hi Jim:
> >
> > Amanda Carpenter of Townhall.com has inquired if we will have a response

> > to
> > McIntyre's claims in their interview yesterday that NASA blocked his IP
> > address? I've heard from both Reto and Robert and can draft something if
> > you want...please let me know.
> >
> > Thanks.
> >
> > Leslie
> >
> > ---
> > mail2web.com What can On Demand Business Solutions do for you?
> > http://link.mail2web.com/Business/SharePoint
> >
> >
> >
> >
>
>
> ---
> mail2web.com Enhanced email for the mobile individual based on Microsoft®
> Exchange - http://link.mail2web.com/Personal/EnhancedEmail
>

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 17 Aug 2007 11:18:18 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>

Mc claims that USHCN data is actually available up-to-date. Is that right? Jim

On 8/17/07, **lesgiss@verizon.net** <lesgiss@verizon.net> wrote:

> Good morning:
>
> Here is the Town Hall story entitled "NASA Blocked Climate Change Blogger from Data"...
>
> http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true
>
> Leslie
>
> ---
> mail2web.com - Microsoft® Exchange solutions from a leading provider - http://link.mail2web.com/Business/Exchange

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 17 Aug 2007 16:10:35 -0400
To: rruedy@giss.nasa.gov
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>, gavin@giss.nasa.gov

What is the matter with the way that we do it? Among other things, we have a more realistic urban adjustment. Changing has various drawbacks. Jim

On 8/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> Gavin suggested some time ago that we should do the analysis with the current USHCN.
>
> I downloaded the "FILIN" USHCN data; the filled-in numbers are marked. So I can use or ignore them. I have to write a program anyway to reformat this file to the format used by GHCN. This includes the easy conversion from F to C, but they also use a different set of ID-numbers to characterize the station. So first, I'll have to construct and check a conversion table to identify the stations properly.
>
> Reto
>
> On Fri, 2007-08-17 at 11:44 -0400, Reto Ruedy wrote:
> > What I wrote was true last week - today it says that monthly data are
> > available from 1900-2005. They must have updated it in the last few
> > days.
> >
> > Reto
> >
> > On Fri, 2007-08-17 at 11:35 -0400, Reto Ruedy wrote:
> > > Jim,
> > >
> > > On the USHCN site it says that the data available from their web site go
> > > to 2002. I never downloaded them since the stage we use is not stored at
> > > that site - we would have to make a special request.
> > >
> > > Reto
> > >
> > > On Fri, 2007-08-17 at 11:18 -0400, James Hansen wrote:
> > > > Mc claims that USHCN data is actually available up-to-date. Is that
> > > > right? Jim
> > > >
> > > > On 8/17/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> > > > Good morning:
> > > >
> > > > Here is the Town Hall story entitled "NASA Blocked Climate

>>> Change Blogger
>>> from Data"...
>>>
>>> http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_c
>>> limate_change_blogger_from_data?page=full&comments=true
>>>
>>> Leslie
>>>
>>>
>>>
>>> ---
>>> mail2web.com - Microsoft® Exchange solutions from a leading
>>> provider -
>>> http://link.mail2web.com/Business/Exchange
>>>
>>>
>>>
>>>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: McIntyre: [Fwd: RE: Access to GISTEMP]
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 17 Aug 2007 18:58:03 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, @gmail.com>

--------- Forwarded message ---------
From: **lesgiss@verizon.net** <lesgiss@verizon.net >
Date: Aug 16, 2007 5:18 PM
Subject: FW: [Fwd: RE: Access to GISTEMP]
To: jhansen@giss.nasa.gov

Jim--here is the email exchange, forwarded by Reto, between McIntyre-Robert-Reto...

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 11:23:12 -0400
To: lesgiss@verizon.net
Subject: [Fwd: RE: Access to GISTEMP]

Jim's email just came in - he changed one sentence (obviously he did not like my "jumps") - fine with me.

Below is the whole interaction as far as access questions are concerned.

Reto

------- Forwarded Message -------
From: Steve McIntyre <stephen.mcintyre@utoronto.ca >
To: rruedy@giss.nasa.gov
Subject: RE: Access to GISTEMP
Date: Thu, 17 May 2007 18:03:28 -0400

Thank you for this. I will observe this condition.

I realize that you have provided some documentation of what you did. In econometrics, it is a condition of publication in journals that authors archive their code and data so that their results can be routinely replicated. I realize that no such standards apply to climate science. However, equally, there is no prohibition on individual climate scientists voluntarily adopting these best practice standards. In that

spirit, I would appreciate it if I could inspect the code used to process the GHCN data. Thanks, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Thursday, May 17, 2007 5:41 PM
To: Steve McIntyre
Cc: rschmunk@giss.nasa.gov
Subject: RE: Access to GISTEMP

After a short meeting with Dr. Hansen, we were advised to let you download whatever you want as long as generally accepted protocols are observed. Please try to do so at a time that does not impact other users, i.e. late nights, weekends.

What we did with the GHCN data is carefully documented in the publications listed on our website. We are not creating an alternate version of the GHCN data, we are mainly combining their data in various steps to create our anomaly maps.

Sincerely,

Reto A. Ruedy

On Thu, 2007-05-17 at 16:37 -0400, Steve McIntyre wrote:
> In answer to your question, I'm interested in the data as it is
> presented to the public. All I was doing was downloading the data that
> is supposedly available to the public, but in a way that would not
take
> 4 weeks of manual labor. If your version differs from the GHCN
version,
> I'm interested in downloading your version so that I can assess the
> differences.
>
>
>
> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Thursday, May 17, 2007 4:14 PM
> To: Steve McIntyre
> Cc: 'Robert B. Schmunk'
> Subject: RE: Access to GISTEMP
>
> Dear Steve,
>
> Our main focus working with observed data is creating a gridded set of
> temperature anomalies which gives reasonable means over comparatively
> large regions - the global mean average being one of the major goals.

> >
> >
> > Please contact the GISTEMP group and inquire if they are
> > willing to provide you with the dataset(s) from which the
> > website applications extract information.
> >
> > If they are not (I do not know what their current policy
> > on this), then you can go a step closer to the source and
> > obtain station data from the same location that the GISTEMP
> > group obtains the original "raw" datasets that they work
> > from. That is the Global Historical Climatology Network at
> > http://www.ncdc.noaa.gov/oa/climate/ghcn-monthly/index.php
> >
> > I'm not sure which specific files from the GHCN site are
> > used. But if the complete GISTEMP data are not available
> > then perhaps Dr. Ruedy of the GISTEMP group could give you
> > some tips on how to use the GHCN data.
> >
> > rbs
> >
> >
> >
> >
> > On May 17, 2007, at 14:46, Steve McIntyre wrote:
> >
> > > How can I download the data then?
> > >
> > > -----Original Message-----
> > > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > > Sent: Thursday, May 17, 2007 2:35 PM
> > > To: Steve McIntyre
> > > Cc: Reto Ruedy
> > > Subject: Re: Access to GISTEMP
> > >
> > >
> > > On May 16, 2007, at 23:44, Steve McIntyre wrote:
> > >
> > > >> I am blocked from access to the page where the email addresses
> are
> > > >> located.
> > >
> > > Good point. That was foolish of me to suggest checking a
> > > page on which access had been turned off.
> > >
> > > I have turned off the restriction that I added to the
> > > server on data.giss.nasa.gov last night so that you can
> > > access the GISTEMP page and view the contact information.
> > >
> > > >> I have been attempting to collate station data for scientific

> > > purposes.
> > >> I have not been running a robot but have been running a program
in
> R
> > >> that collects station data.
> > >
> > > It is an automated process scraping content from the website,
> > > and if that isn't what a web robot does, then it's close
> > > enough.
> > >
> > > rbs
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >>
> > >> -----Original Message-----
> > >> From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > >> Sent: Wednesday, May 16, 2007 11:33 PM
> > >> To: Steve McIntyre
> > >> Cc: Reto Ruedy
> > >> Subject: Re: Access to GISTEMP
> > >>
> > >>
> > >> Steve,
> > >>
> > >> Although you did not provide any further details about
> > >> your problem, I will assume that you are the person on
> > >> the cable.rogers.com network who has been running a
> > >> robot for the past several hours trying to scrape
> > >> GISTEMP station data and who has made over 16000 (!)
> > >> requests to the data.giss.nasa.gov website.
> > >>
> > >> Please note that the robots.txt file on that website
> > >> includes a list of directories which any legitimate
> > >> web robot is _forbidden_ from trying to index. That
> > >> list of off-limits directories includes the /work/
> > >> and /cgi-bin/ directories.
> > >>
> > >> Because the robot running on the cable.rogers.com network
> > >> has rather obviously and blatantly violated those rules,
> > >> I placed a block on our server restricting its access
> > >> to the server.
> > >>
> > >> If you are indeed the person who has been running that
> > >> particular web robot, and if you do need access to some

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 17 Aug 2007 19:06:48 -0400
To: rruedy@giss.nasa.gov
CC: "Gavin Schmidt" <gschmidt@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Technical arguments with a jackass or a jester, which most observers not wanting to understand the details, can appear to lower one to a comparable level. Better not argue with him about whether we fix data; we do an urban adjustment, for example. Jim

On 8/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> TOBS does not have the station history adjustment (SHAP) - FILIN has it
> and is the last stage before their urban adjustment. I can run with or
> without the filled-in data (filling in added .05C/century to the US mean
> trend in our analysis).
>
> Once the new USHCN data are reformatted, it's just a question of what to
> do with years 2006 and 2007. Otherwise it's simply switching an input
> file.
>
> I still think, Steve (in the Town Hall interview below and when he talks
> to anybody but us) mixes us up with Tom Karl's group - they "fix"
> station data, we don't. If we get this misunderstanding out in the open,
> it might die down as well.
>
> Reto
>
> On Fri, 2007-08-17 at 16:23 -0400, Gavin Schmidt wrote:
> > I didn't suggest using their urban adjustment, but that the most
> > up-to-date USHCN data may have more in the way of documented station
> > adjustments and more data earlier on. The FILIN data do not include
> > their urban adjustment as far as I can tell. I get the impression from
> > the USHCN web site that you should be able to extract just the TOBS
> > corrected data without the FILIN.
> >
> > The point is to make sure that the difference between the earlier USHCN
> > data set we were using and the latest version does not make a
> > significant difference to the results. Since any independent replication
> > of the GISS procedure will use the currently available data set (not the
> > one we are using), we should probably be ahead of the game in
> > understanding what impact it has.
> >
> > As is usual in these cases, the smarter of the court jesters have
> > already stopped talking about 1934 and are now pushing the transparency
> > 'meme'. That has a lot more resonance....
> >
> > Gavin
> >

> On Fri, 2007-08-17 at 16:10, James Hansen wrote:
> > What is the matter with the way that we do it? Among other things, we
> > have a more realistic urban adjustment. Changing has various
> > drawbacks. Jim
> >
> > On 8/17/07, Reto Ruedy < rruedy@giss.nasa.gov> wrote:
> > Jim,
> >
> > Gavin suggested some time ago that we should do the analysis
> > with the
> > current USHCN.
> >
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> > marked.
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> > conversion from F to C, but they also use a different set of
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> > to characterize the station. So first, I'll have to construct
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> > a conversion table to identify the stations properly.
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> >
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> > > days.
> > >
> > > Reto
> > >
> > > On Fri, 2007-08-17 at 11:35 -0400, Reto Ruedy wrote:
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> > > >
> > > > On the USHCN site it says that the data available from
> > their web site go
> > > > to 2002. I never downloaded them since the stage we use is
> > not stored at
> > > > that site - we would have to make a special request.
> > > >
> > > > Reto
> > > >
> > > > On Fri, 2007-08-17 at 11:18 -0400, James Hansen wrote:
> > > > > Mc claims that USHCN data is actually available
> > up-to-date. Is that

Subject: Fwd: Fw: Cool Summer News - MARK THRASHER
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 18 Aug 2007 09:14:19 -0400
To: @gmail.com>, "James Hansen" <jhansen@giss.nasa.gov>

--------- Forwarded message ---------
From:)@sympatico.ca>
Date: Aug 18, 2007 8:23 AM
Subject: Fw: Cool Summer News
To: Lamine.Bekkout@ontario.ca, baird.j@parl.gc.ca, dramsay.mpp.kirklandlake@liberal.ola.org, jhansen@giss.nasa.gov, johnyakabuski@pc.ola.org, lgreen@cfra.com , mharris@cfra.com

---

From: *FOS extracts <fosextracts@shaw.ca>*
To: *<Undisclosed-Recipient:;>*
Subject: *Fw: Cool Summer News*
Date: *Fri, 17 Aug 2007 14:26:04 -0600*

Yes!; but has anybody told the Governator yet ? - FOS ed

Cool Summer News

By Lloyd Billingsley

FrontPageMagazine.com | 8/16/2007

"Don't tell Al Gore, but global warming is taking a holiday in Sacramento this week."

That news came in "Summer chill is one for the ages," a front-page, above-the-fold story in the August 7 *Sacramento Bee*. California's capital, normally a furnace in summer, was experiencing the lowest "high" temperatures since they began keeping records in1877, a full 130 years ago. Such generous coverage did not extend to other cool news, including NASA's revision of the top-ten hottest years.

The hottest year on record is no longer 1998 but 1934, and the

warmest 10 years include 1921, 1931, 1934, and 1938, all before World War II. Stephen McIntyre, a Canadian, noticed an error in the NASA calculations and notified the agency, which quietly made the changes. The media were slow to respond and the *Washington Post* story of August 15 was not about the temperature change in itself, but focused on charges by conservative commentators such as Rush Limbaugh that man-made global warming was occurring within NASA.

NASA scientist James Hansen, the prime mover of global warming prophecy, downplayed the changes. The past six years, he told reporters, were only 0.15 degrees centigrade cooler than previous claims. Hansen charged that critics were trying to muddy the debate and that the slight shift changed nothing about the long-term prospects for warming, which he views as a crisis situation. The .15-degree change is more significant when one considers that the level of global warming actually detected ranges between one and two degrees Fahrenheit or .07 and .08 degrees Celsius. Hansen did not get into that, but earlier this year he did squabble with someone else over global warming – his own boss.

"I have no doubt that a trend of global warming exists. I am not sure that it is fair to say that it is a problem we must wrestle with. To assume that it is a problem is to assume that the state of the Earth's climate today is the optimal climate, the best climate that we could have or ever have had, and that we need to take steps to make sure that it doesn't change."

The speaker was NASA administrator Michael Griffin, on National Public Radio's May 31 "Morning Edition." Griffin's statement so jarred NPR staff, unaccustomed to any doubts on this issue, that they turned immediately to James Hansen.

"I almost fell off my chair," he told NPR's Madeleine Brand. "It's

remarkably uninformed. You know, civilization developed with the current climate. And we've got an infrastructure along coastlines that assumes that our climate is going to stay roughly what it is now. But if we are going to simply allow human emissions to greatly change climate, I think that's extremely arrogant of our species. It will be devastating to many other species on the planet, not to mention many of our own species."

On the same program, Mr. Hansen said, "I think it's very timely to get together and start to do something where time is really running out. . . We are at a tipping point. If we don't begin to make some changes in our emissions – reducing greenhouse gas emissions – we're going to get some really large climate changes." That is also the view of Al Gore, also in the news this summer when police arrested his son, Al Gore III, on suspicion of drug possession, and for driving a Toyota Prius 100 mph on the San Diego Freeway, 30 mph above the legal limit.

A few days later, on July 7, the former vice-president staged the massive multi-venue Live Earth concert to combat climate change, featuring such atmospheric scientists as Bon Jovi and Madonna. Two days later, on July 9, it snowed in Buenos Aires, Argentina, for the first time since 1918, nearly 90 years. That story was not widely covered in America but in Britain the *Guardian* observed, "The snow followed a bitter cold snap in late May that saw subfreezing temperatures, the coldest in 40 years in Buenos Aires. That cold wave contributed to an energy crisis and 23 deaths from exposure."

On August 4, a month after Al Gore III was arrested, the temperature in Sacramento was 104. In the next 24 hours, the temperature dropped a full 28 degrees to 74, the lowest "high" temperature for an August 5 since 1877, only a few years after Mark Twain was writing for the *Sacramento Union*. The next day, August 6, 2007, the mercury plunged still lower, to 74 F, another record and the lowest

"high" temperature for that day since 1906, 101 years ago, when the reading was 77.

Coverage of the "chill for the ages" did not include statements from Al Gore or James Hansen. Proponents of warming tend to remain silent when weather conditions fail to conform with doomsday prophecy. The summer developments, particularly the temperature shift at NASA, confirm that this creed should refrain from any claims of inerrancy.

The coverage suggests that mainstream media remain worshipful of global warming orthodoxy, and still believe that NASA knows best. They could take a lesson from Mark Twain, who warned about "such wholesale returns of conjecture out of such a trifling investment of fact." The actual low temperatures, a matter of fact, not conjecture, suggest that to doubt global warming is both reasonable and cool.

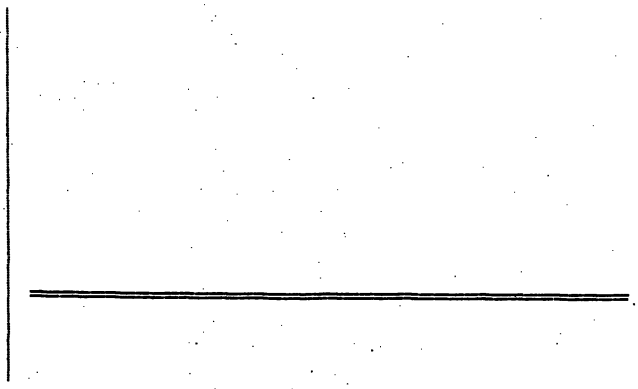
Lloyd Billingsley is the author of *From Mainline to Sideline, the Social Witness of the National Council of Churches* , and *Hollywood Party: How Communism Seduced the American Film Industry in the 1930s and 1940s*.

Subject: Re: Usufruct and your mailing list
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 18 Aug 2007 14:28:11 -0400
To: @shaw.ca>

You are quite right. I have been justly criticized for not responding to swiftboaters. Unfortunately, it takes a lot of time, so we need to find the right balance. Jim

On 8/18/07, @shaw.ca> wrote:

> Dr. Hansen,
>
> I've been following the hoopla about the supposed impact of minor errors in the U.S. climate database, blown way out of proportion by McIntyre (as is usual for that bunch), and I have had to respond to some individuals and organizations regarding this. suggested that I get on your mailing list, and I hope this note will do that.
>
> As the recent it I spent far too much of my year as responding to the kooks who are beholding to the petroleum industry, as well as seeing that our policy on climate change was updated (several times) While it is true that their arguments are often not only silly, but of course downright deceitful, if you are close to the public you realize that many people actually believe that these people are among 'the experts' on climate change. So while many of our real experts here in Canada (such as Andrew Weaver, Lawrence Mysak, etc.) feel that it is usually a waste of time to respond to these people, or to the media regarding their rants, it IS sometimes necessary. I am pleased that you dealt with this aspect in your recent "Usufruct & the Gorilla" note which I obtained through Weaver.
>
> Climate change is not my own area of expertise (even though I have published in that area very occasionally), I still need to rely on the real experts (such as yourself, Weaver, etc.) to make my own responses. I would therefore be delighted if you could add my address above to your regular mailing list.
>
> Thank you,



Subject: ADD
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 18 Aug 2007 14:28:41 -0400
To: "Darnell Cain" <dcain@giss.nasa.gov>, "James Hansen" <jhansen@giss.nasa.gov>

--------- Forwarded message ---------
From: @shaw.ca>
Date: Aug 18, 2007 12:35 PM
Subject: Usufruct and your mailing list
To: jhansen@giss.nasa.gov

Dr. Hansen,

I've been following the hoopla about the supposed impact of minor errors in the U.S. climate database, blown way out of proportion by McIntyre (as is usual for that bunch), and I have had to respond to some individuals and organizations regarding this. suggested that I get on your mailing list, and I hope this note will do that.

As the recent it I spent far too much of my year as responding to the kooks who are beholding to the petroleum industry, as well as seeing that our policy on climate change was updated (several times) While it is true that their arguments are often not only silly, but of course downright deceitful, if you are close to the public you realize that many people actually believe that these people are among 'the experts' on climate change. So while many of our real experts here in Canada (such as Andrew Weaver, Lawrence Mysak, etc.) feel that it is usually a waste of time to respond to these people, or to the media regarding their rants, it IS sometimes necessary. I am pleased that you dealt with this aspect in your recent "Usufruct & the Gorilla" note which I obtained through Weaver.

Climate change is not my own area of expertise (even though I have published in that area very occasionally), I still need to rely on the real experts (such as yourself, Weaver, etc.) to make my own responses. I would therefore be delighted if you could add my address above to your regular mailing list.

Thank you,

Subject: Re: GISS data update
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 18 Aug 2007 22:24:31 -0400
To: "Andrew Elek" < @sympatico.ca>, "Makiko Sato" <makis@giss.nasa.gov>
CC: James.E.Hansen@nasa.gov

Makiko, can you answer this please? Thanks. Jim

On 8/18/07, **Andrew Elek** < @sympatico.ca> wrote:

> I am doing some research using the GISS data. Has the Table on global anomalies (based on met.station data) been recently updated in response to Mr. McIntyre's comments? I know that the US data have been updated for the most recent ten years.
>
> Thanks
>
> Andrew Elek
>
> Andrew Elek
>
> Management Consultant
>
> Toronto
>
> (416) 920-3062
>
> e-mail(home): @sympatico.ca

Subject: PRINT: THOMAS
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 20 Aug 2007 02:14:14 -0400
To: "James Hansen" <jhansen@giss.nasa.gov>, " @gmail.com>

http://www.townhall.com/columnists/CalThomas/2007/08/16/not_so_hot_air

Not so hot air
By Cal Thomas
Thursday, August 16, 2007
Send an email to Cal Thomas

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In every child's life there comes a time when childhood fantasies are shattered and he or she is forced to accept reality - there is no Santa Claus or tooth fairy; parents don't always mean it when they promise to stay married until parted by death.

Grown-up scientists, theologians, historians, archaeologists and others who pursue facts and objective truths are rooted in reality and constantly adjusting their conclusions, theories and hypotheses when new information comes to light. Those who ignore facts and cling to outdated information, or outright falsehoods, can quickly embrace fanaticism.

So it is with "global warming," the secular religion of our day that even has a good number of adherents among people of faith. Having decided to focus less on the eternal and whether anyone dwells there, global warming fundamentalists are pushing planet worship on us in a manner that would make a jihadist proud.

There are at least two characteristics all fundamentalists share. One is the exclusion and sometimes suppression of any and all information that challenges or contradicts the belief one wishes to impose on all. The other is the use of the state in pursuit of their objectives, overriding the majority's will.

With global warming, some members of the scientific community - not all of whom are climatologists, who disagree among themselves - have circled the wagons, denying access and labeling illegitimate any scientist who disagrees with the "doctrines" of a recently warming planet. The big media have been complicit in this censorship or ridicule of alternative views, mostly refusing to interview anyone who does not push the global warming faith. CBS News this week broadcast a

A protester sets up camp at the camp for Climate Action on the site of the proposed expansion for Heathrow Airport at Sipson near London August 14, 2007. Hundreds of climate demonstrators set up a tent camp next to London's Heathrow airport on Monday and threatened "direct action" at the world's busiest air hub to protest against global warming. REUTERS/Luke MacGregor (BRITAIN)

four-part series on "climate change." Newsweek magazine recently slammed global warming "deniers." That brought a counterattack in the Aug. 20 issue from Newsweek contributor Robert Samuelson, who termed the article "highly contrived" and "fundamentally misleading." In 1975, Newsweek was just as convinced - using "scientific evidence" - that a new Ice Age was upon us.

Many global warming fanatics have pointed to NASA as proof that their concerns about a warming planet are justified. They have repeatedly cited the Goddard Institute for Space Studies (GISS), whose director, James Hansen, has asserted that nine of the 10 warmest years in history have occurred since 1995, with 1998 the warmest. When NASA was confronted with evidence provided by Climate Audit, a blog run by Stephen McIntyre devoted to auditing the statistical methods and data used in historical reconstructions of past climate data, it reversed itself. Without the fanfare used to hype the global warming fanaticism it had earlier supported, NASA now says four of the top 10 years of high temperatures are from the 1930s. Several previously selected "warm" years - 2000, 2002, 2003 and 2004 - fell behind 1900.

GISS now says its previous claim that 1998 was the warmest year in American history is no longer valid. The warmest year was 1934.

Has any of this new information changed the minds of the global warming fundamentalists? Nope. Neither has much of it seen the light of day in the mainstream media, which continue to carry stories where seldom is heard an alternative word and the skies are polluted all day.

The New York Times ran a story in its Sunday Business section last week that said it would cost a lot of money to fight global warming. The implication being that this money should come from government (and taxpayers), along with more government regulations and control over our lives by the very people who seem to have difficulty winning wars and controlling spending.

The Earth has warmed and cooled over many centuries. One can get a sense of who is telling the truth about global warming by the company the concept keeps. Most of the disciples of global warming are liberal Democrats who never have enough of our money and believe there are never enough regulations concerning the way we lead our lives. That ought to be enough to give everyone pause, along with emerging evidence that the global warming jihadists may be more full of hot air than the climate they claim is about to burn us up.

Cal Thomas is America's most widely syndicated op-ed columnist and co-author of Blinded by Might.

Subject: Re: Temperature data
From: "James Hansen" <jhansen@GISS.NASA.GOV>
Date: Mon, 20 Aug 2007 10:59:54 -0400
To: ". @comcast.net>
CC: James.E.Hansen@nasa.gov, makikosato@GISS.NASA.GOV

It is no bother, but as I just noted to another member of the public, it is impossible to keep up with this disinformation that some people want to spread. Their aim seems to be to sew confusion, and they are succeeding. Cal Thomas' statements are wrong -- partly he has confused U.S. and global temperature, but the statements are not even true for the U.S. I will forward a piece that should clarify the matter.
Jim Hansen

On 8/20/07, :@comcast.net> wrote:

> **Sorry to burden you with a quick question, which I hope one of you can answer. Our daily newspaper recently printed a column by Cal Thomas attempting to discredit concern about global warming by alleging that NASA was wrong in arguing that 9 out of 10 of the warmest years on record have occurred since 1995. Instead he says that thanks to McIntyre it is now clear that 4 of the 10 warmest years were in the 1930s, that 2000, 2002, 2003, 2004 actually fall behind 1900, and that the warmest year on record is 1934. I note that the GISS website does credit McIntyre with some kind of correction, but as I look at your latest graphs (perhaps I am not looking at the right ones) it does not appear to me that 1900 or the 1930s had record warm years.**
> **Since I hope to write an op-ed piece for the local paper (Naples Florida Daily News) I would like to know how much if any truth lies in what Thomas says. Thank you for any information you can provide, and again sorry to bother you.**

Subject: Fwd: alt.cleaning
From: James Hansen <jhansen@giss.nasa.gov>
Date: Mon, 20 Aug 2007 20:09:51 -0400
To: makis@giss.nasa.gov, rruedy@giss.nasa.gov

For the sake of minimizing the number of data sets, you may as well drop the case that singles out two stations. The comparisons that I will want to use are with data as we adjust it and with no stations adjusted. Whether we mentioned two stations explicitly in the paper doesn't really matter -- we did adjust them. The two extreme cases make a shorter, cleaner story.
Jim

> X-Mailer: QUALCOMM Windows Eudora Version 6.2.5.6
> Date: Mon, 20 Aug 2007 16:25:56 -0400
> To: jhansen@giss.nasa.gov
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: Fwd: alt.cleaning
> Cc: rruedy@giss.nasa.gov
>
> Jim,
>
> I made a set of maps and 3 linegraphs with these data Reto gave me and put them on http://www.giss.nasa.gov/~makis/GISS_Temp/.
>
> Makiko
>
> > X-Authentication-Warning: neo.giss.nasa.gov: cdrar set sender to rruedy@giss.nasa.gov using -f
> > Subject: alt.cleaning
> > From: Reto Ruedy <rruedy@giss.nasa.gov>
> > Reply-To: rruedy@giss.nasa.gov
> > To: makis@giss.nasa.gov
> > Date: Thu, 16 Aug 2007 20:03:24 -0400
> > X-Mailer: Evolution 2.8.3 (2.8.3-2.fc6)
> >
> > Makiko,
> >
> > I put the files you wanted on /clima1/Steve/alternate_cleaning
> > Hope I remembered correctly.
> >
> > Reto

Subject: Re: can we talk briefly?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 23 Aug 2007 21:01:57 +0200
To: "Andrew Revkin" <anrevk@nytimes.com>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

I believe that we have clearly stated several times that the ranking does not make much sense. Although we have discouraged it, anyone can see the results, so they can do the ranking themselves.

The uncertainty due to incomplete spatial coverage is objective, based on sampling a complete data set with realistic temporal-spatial variability with the actual station locations. Incomplete spatial coverage is probably the largest source of error. It is the reason that other groups did not find 2005 to be the warmest year, because they did not include the complete Arctic, which had a huge positive anomaly. We included it via our interpolations, and we verified from satellite measurements that the Arctic anomaly was, if anything, actually larger than we obtained with our interpolations.

Other components of the complete error bar must, indeed, involve some subjectivity, and they are a function of time, i.e., the uncertainty in comparing two near by years is much less than in comparing recent results to those many decades earlier..

Jim

On 8/23/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

> howdy,
>
> hoping we can chat briefly about the temperature-record revision.
>
> much of this seems simply to reflect the importance of anyone (noaa, nasa, etc) clearly stating when uncertainties preclude designating years (particularly regionally) as a string of firm points, one of which can be deemed a 'record.'
>
> noaa says it's working on an error-bar approach to its time series (but also said there are subjectivity issues that come in when doing so..?).
>
> 212 556 7326 if you get 5-10 mins.
> (except for 1-2 p.m .)
>
> thanks jim.
>
> andy
>
> **ANDREW C. REVKIN**
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: *The North Pole Was Here*

> Amazon book: *The Burning Season*
> Acoustic-roots band Uncle Wade

Subject: Re: A Light On Upstairs?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 23 Aug 2007 21:21:12 +0200
To: "David Easterling" <David.Easterling@noaa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

David, it should not affect the comparison of 1934 and 1998, and does not. If you look in our 2001 paper you will see that we had 1934 as the warmest year, by an imperceptible, insignificant amount, as we do now. We find that the Mc turkey seems to be making up stuff to try to get media attention. Jim (Do you have my Gorilla e+mail - not sure if you are on my email list.

On 8/23/07, **David Easterling** <David.Easterling@noaa.gov> wrote:

> Hi Jim,
>
> We are starting to get questions about the differences between our US temps and yours. We
> are trying to understand why substituting the adjusted USHCN data for the unadjusted
> starting in 1999 would make much of a difference, esp. 1998. The way I understand it
> you guys were pulling the unadjusted GHCN updates rather than the adjusted updates,
> correct? Other than than you are making urban adjustments based on the satellite
> lights, whereas ours is still using the old population regression adjustment.
>
> One other fly in the ointment, we have a new adjustment scheme for USHCN (V2) that appears to adjust out some, if not most, of the "local" trend that includes
> land use change and urban warming.
>
> Best,
> Dave
>
> --
> David R. Easterling, Ph.D
> Chief, Scientific Services Division
> NOAA's National Climatic Data Center
> 151 Patton Avenue
> Asheville, NC 28801
> V: +1 828 271 4675
> F: +1 828 271 4328
> David.Easterling@noaa.gov

Subject: Re: just to be sure..
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 23 Aug 2007 20:51:59 +0200
To: "Andrew Revkin" <anrevk@nytimes.com>
CC: gschmidt@giss.nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

We can add an uncertainty, indeed we already include a bar at several points on our temperature curve, but we note that it only includes the largest source of uncertainty in the temperature change (incomplete spatial coverage).

As far as I know we do not make such a list. We don't like such lists, because the results are not significant and are certain to differ from one group to another. It is generally the media that makes a list. We look for a new record high, but note that it is a virtual tie if the difference is small.

Just look at out published paper. It has 1934 as the warmest year, by an insignificant amount, with 1998 second. The same result that we have now. This ranking was not affected by the flaw in post 2000 data.

Of course it is good to improve the station data. Temperature is an absolute measurement, however, so errors over time are not cumulative. When there are several thousand stations it is easy to find what seem like a huge number of stations with problems.

Jim

On 8/23/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

> noaa folks are saying they're working on adding a description of uncertainty levels to year-to-year temp time series.
> and lawrimore says they could do better in press outreach to stress this.
>
> do you agree that this should be more clearly communicated... should GISS or NOAA or others even try to make a list of individual years as sharp data points?
>
> separately, i'm still a bit confused about whether GISS ever had 1934 as hottest 48-state year or not. can you help clarify?
>
> finally, do you agree that generally we (globally) should be doing a lot more to improve surface temperature tracking?
> i never, til today, visited www.surfacestations.org and found it quite amazing. if our stations are that shoddy, what's it like in Mongolia?
>
> **ANDREW C. REVKIN**
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965

> Arctic book: *The North Pole Was Here*
> Amazon book: *The Burning Season*
> Acoustic-roots band Uncle Wade

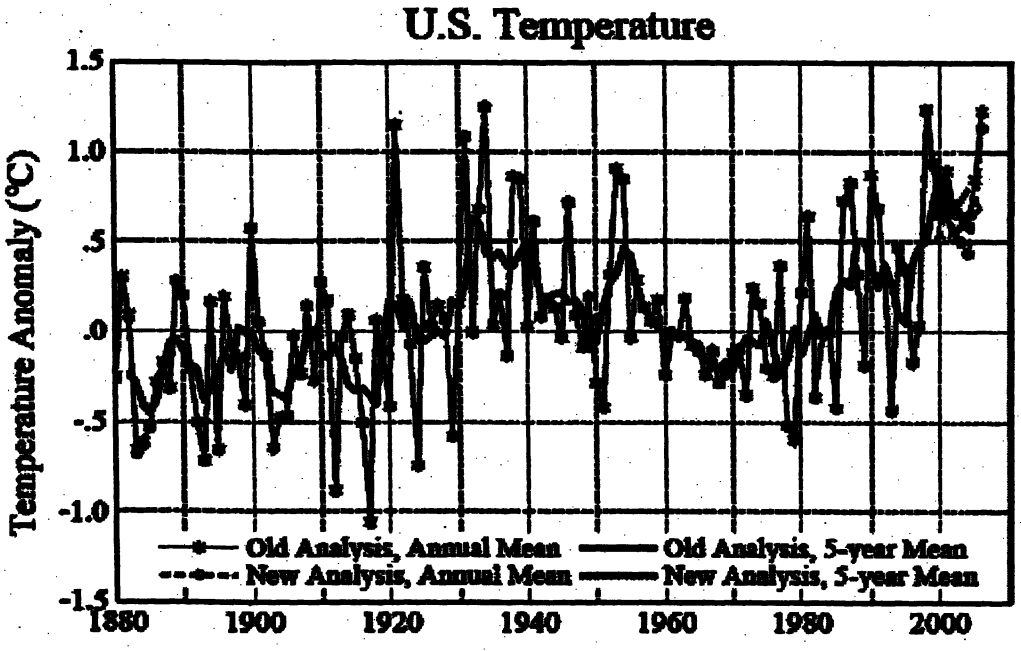
Subject: Re: one last request (data for the graph below)
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 24 Aug 2007 11:42:20 +0200
To: "Andrew Revkin" <anrevk@nytimes.com>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>
CC: gschmidt@giss.nasa.gov

Andy, I am in but Makiko or Reto should have the data -- it is Makiko's plot. Jim

On 8/23/07, **Andrew Revkin** <anrevk@nytimes.com> wrote:

one last query.

do you have the data easily available for this graph?
(our graphix folks would need to redraw to our style.. and that is anomaly compared to what baseline?)



ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: *The North Pole Was Here*
Amazon book: *The Burning Season*
Acoustic-roots band Uncle Wade

Subject: Re: just to be sure..
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 24 Aug 2007 12:02:54 +0200
To: rruedy@giss.nasa.gov
CC: gschmidt@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>, "Andrew Revkin" <anrevk@nytimes.com>

Not sure that I understand this. It mentions 1934 and 1998 were tied for several months in our monthly updates, but later you say that 1998 was warmest (presumably by a meaningless 0.01, although I do not remember that - and why would we have cared or why would we have checked that)? In general I think that we want to avoid going into more and more detail about ranking of individual years. As far as I remember, we have always discouraged that as being somewhat nonsensical, other that the question of what is the warmest year, with uncertainty. Also I don't think that people, such as Gore, are being unreasonable when they make statements such as (about) 9 of 10 warmest years were in the past two decades, or however they say that -- but this of course refers to global temperature, which is much less noisy and more relevant to the question of human+made climate change. The contrarians are cleverly mixing up these two matters, global and U.S., thus completely confusing the public discussion, and again winning more time in their attempt to keep things confused, not without aid from their unwitting ally, the media. As I tried to make clear in 'Usufruct', that is the real battle, as we are running out of time. They will live in infamy, but they either do not understand or they don't give a damn. Jim

On 8/23/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> I don't know whether Andrew Revkin is interested in the details below:
>
> The US temperature graph in our 1999 paper, based on GHCN data, shows 1934 0.5C warmer than 1998; 1998 was in 5th place behind 1921, 1931, 1938, 1953.
>
> In the corresponding graph in our 2001 paper, now based on the carefully corrected USHCN data, 1934 and 1998 are in first, 1921 in third place (NOAA who provided the USHCN data had 1998 slightly ahead of 1934).
>
> The US table we had posted during all of 2006 showed 1998 and 1934 even at 1.24C. (I got a copy from a journalist in Brazil, we don't save these data).
>
> As far as I know, the US table on our site from Jan to Aug 2007 was the first and only one with 1998 ahead of 1934 - some US stations must have still been missing in the GHCN file we downloaded on January 8, 2007. (Each month, GHCN regenerates the whole file over a period of a few days; in previous years we had to wait til mid January for the US stations to be added in again).
>
> Reto
>
> On Thu, 2007-08-23 at 20:51 +0200, James Hansen wrote:
> > We can add an uncertainty, indeed we already include a bar at several

Re: just to be sure..

> points on our temperature curve, but we note that it only includes the
> largest source of uncertainty in the temperature change (incomplete
> spatial coverage).
>
> As far as I know we do not make such a list. We don't like such
> lists, because the results are not significant and are certain to
> differ from one group to another. It is generally the media that
> makes a list. We look for a new record high, but note that it is a
> virtual tie if the difference is small.
>
> Just look at out published paper. It has 1934 as the warmest year, by
> an insignificant amount, with 1998 second. The same result that we
> have now. This ranking was not affected by the flaw in post 2000
> data.
>
> Of course it is good to improve the station data. Temperature is an
> absolute measurement, however, so errors over time are not cumulative.
> When there are several thousand stations it is easy to find what seem
> like a huge number of stations with problems.
>
> Jim
>
>
> On 8/23/07, Andrew Revkin <anrevk@nytimes.com> wrote:
>
> noaa folks are saying they're working on adding a description
> of uncertainty levels to year-to-year temp time series.
> and lawrimore says they could do better in press outreach to
> stress this.
>
> do you agree that this should be more clearly communicated...
> should GISS or NOAA or others even try to make a list of
> individual years as sharp data points?
>
> separately, i'm still a bit confused about whether GISS ever
> had 1934 as hottest 48-state year or not.
> can you help clarify?
>
> finally, do you agree that generally we (globally) should be
> doing a lot more to improve surface temperature tracking?
> i never, til today, visited www.surfacestations.org and found
> it quite amazing. if our stations are that shoddy, what's it
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> Arctic book: The North Pole Was Here
> Amazon book: The Burning Season
> Acoustic-roots band Uncle Wade
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Re: Real Deal
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 16 Aug 2007 02:12:52 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Reto Ruedy" <rruedy@giss.nasa.gov>

Makiko, thanks, there are about half a dozen urls that I should give, for the primary references, perhaps you could find some of those - although I assume that I can just copy those from the GISS web page. Jim

On 8/15/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

Jim,

There are some more.

(1) The biggest error I made was that I didn't notice that you had exchanged Fig. 2 and 3.

Others are minor.
(2) Do you want to give the url
http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf
after "the e-mail sent last week" in the 3rd paragraph?

(3) Do you really mean "micrometer" not magnifying glass? I thought a micrometer measures thickness of a paper or something, but I am not sure.

(4) "relative hot" or "relatively hot"?

(5) ")" miising after "Dangerous" at the end of a paragraph.

Send me more before I may be able to read it because I

Makiko

On 8/15/07, Makiko Sato <makis@giss.nasa.gov> wrote:
>
> >Date: Wed, 15 Aug 2007 18:51:56 -0400
> >To: "James Hansen" <jhansen@giss.nasa.gov>
> >From: Makiko Sato <makis@giss.nasa.gov>
> >Subject: Re: Real Deal
> >
> >I moved some paragraphs so that figures come either at top or bottom
> >of pages, but I may have missed some lines, so please check
> >carefully. I can change figure sizes easily.
> >
> >Makiko
> >

Subject: Re: The 1934 flap
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 26 Aug 2007 19:06:34 -0400
To: @aol.com>, "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>
CC: James.E.Hansen@nasa.gov

Makiko or Reto, I presume that the numbers is referring to are from our global temperature analysis, is that right?

the exaggerated flap refers to the estimated mean temperature for the area covered by the 48 contiguous states, covering 2% of the globe. 1934 and 1998 (for the U.S.) have long been indistinguishable in our analysis, differing by an insignificant few hundredths of a degree. There was a flaw in our computer program that affected temperatures over the U.S. after 2000 (which affected global temperatures by an imperceptible amount, in the third decimal); the global temperature was of course much higher in 1998 than in 1934. We described 1934 and 1998 over the U.S. as a statistical dead-heat, but it has flipped from one to the other when additional stations are added or corrections are provided for existing stations, analogous to election results changing with recounts or addition of late ballots. Unlike an election, though the flip really doesn't matter as you should just say they are practically the same. It does give fodder to bloggers and Rush, though.

Note also, although the year to year fluctuations are large for an area the size of the contiguous states, the long-term (century scale) warming has been as large for the U.S. as for the global mean (actually a bit larger).

Jim Hansen

On 8/25/07, @aol.com> wrote:

> I remember reading that the correction to the US temperature record had 1934 as hotter than 1998. But when I look at the GISTEMP annual data table, it gives a figure of 0.05 K for the 1934 anomaly and 0.76 K for the 1998. Does the table not reflect the revision? Please let me know. I'm on a blog arguing with some crackpot who insists NASA is for some reason covering up the fact that 1934 was a hot year.

Subject: Re: Question about Warmest Year
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 26 Aug 2007 19:21:20 -0400
To: "Alan Dyer" <alandyer@telusplanet.net>
CC: James.E.Hansen@nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Alan, you have been given some misinformation -- I will forward a couple of e-mails that clarify. Jim Hansen

On 8/25/07, **Alan Dyer** <alandyer@telusplanet.net> wrote:

> Hello Dr. Hansen,
>
> I'm with the science centre in Calgary, Canada and am looking for some authoritative and quotable information on what GISS researchers have measured as the warmest years in the last century. The information I have from Goddard press releases such as at:
>
> http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html
>
> is that 2005, 1998, 2002, 2003 and 2006 are the warmest years of the last 100 years.
>
> However, a columnist for a local newspaper in an August 24 editorial denying global warming and Arctic ice reduction quotes Goddard research as saying this:
>
> ---
>
> NASA's Goddard Institute for Space Studies had to back down from its previous claim that 1998 was the U.S.'s hottest year on record. That distinction now goes to 1934.
>
> Indeed, four of the hottest years on record are in the 1930s and polar bears survived just fine.
>
> ---
>
> Before I counter with any rebuttal or letter to the editor I wanted to check what might be the source of that "fact" attributed to Goddard research and how the writer might have misconstrued some statement out of GISS. I'm looking for a quote I can include in my rebuttal and even a reference to some published paper that provides an authoritative answer to the question of "what were the warmest years."
>
> Many thanks for your time.
>
> Alan Dyer
> Producer and Astronomer
> TELUS World of Science
> Calgary, Canada

PS: I have also sent a similar inquiry to Dr. Mark Schoeberl at GSFC.

Alan Dyer
P.O. Box 1436, Stn. M
Calgary, Alberta
Canada T2P 2L6

Ph.:
Ph.:
Ph.: (403) 268-8331 (work)

Subject: Re: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 26 Aug 2007 20:15:47 -0400
To: "Jack Kaye" <jack.a.kaye@nasa.gov>
CC: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>, "Ellen Cohen" <ellen.cohen-1@nasa.gov>

Hi Jack,

Just back It seems to me that the paragraph is basically o.k., but I would like Reto and Makiko to verify that.

The "ranking" of individual years is something that we try to discourage media from pursuing, especially for an area the size of contiguous U.S. (2% of globe). There are too many years that are statistically indistinguishable.

Also, the results change as new stations are added to the record or old ones are changed/corrected. Indeed, WMO and/or NOAA add previously unreported data every month and often correct errors or make adjustments to some data from prior months. In general each month the data set that we obtain differs (slightly) in the past, as well as having the addition of another month. So it is like an election in which you continually have recounts and absentee ballots added. In the case of an election, change of order makes a difference, as you have to have a winner. But in the temperature analysis, in the case of razor thin differences, these flips have no physical significance (only an impact is when an eagle-eyed contrarian finds something that can be used as fodder for whatever ends they have).

Jim

On 8/23/07, **Jack Kaye** <jack.a.kaye@nasa.gov> wrote:

> Jim - In attempting to close the loop on this so we can deal with the legislative action, I wanted to see if we could come up with any more quantitative information. I looked at the longer text that you had the link to ("The Real Deal: Usufruct & the Gorilla).
>
> First, it appears that the "XX July 2007" in your message below should be 7 August 2007.
>
> In terms of 1934 vis a vis the more recent years, the key data I see from your text that may be worth citing are:
>
> • The four warmest US years on record were 1921, 1934, 1998, and 2006
> • The mean temperature anomaly in the US was 1.25 deg C in 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree difference between the two, which is smaller than the uncertainty in the actual numbers.
> • In 1934 the US was warm relative to much of the rest of the word, while in 2006 the world was much warmer.
>
> If these points are enough, we can try to get them into a short paragraph. How about this?
>
> The computer program used by Dr. Hansen to create the temperature record is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen in a peer-reviewed publication from 2001. The flaw affected temperatures only in the United States and only after 2000. As explained by Dr. Hansen in an e-mail sent out on August 10, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Thomas Karl of NOAA's National Climatic Data Center and his colleagues, who

used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Dr. Hansen's computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and his computer program picked up the data for these same stations reported in the World Meteorological Organization's GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISS Temperature web page. Based on the current analysis, the four warmest years in the US record were 1921, 1934, 1998, and 2006. The mean temperature anomaly in the US was approximately 1/10 degree C greater in 1934 (1.25 degrees) than in 2006 (1.13 degrees); this difference is less than the uncertainty in the calculated mean. One point worth noting is that in 1934, the US was warm relative to much of the rest of the world, while in 2006, the warmth of the US was accompanied by that of much of the globe.

Would you be okay with this? If not, do you have suggestions? I don't know that we'd need much more than this!

On 8/15/07 6:18 AM, "Jack Kaye" <jack.a.kaye@nasa.gov> wrote:

> Jim – thanks for sending. I'll watch for next installment. I appreciate the prompt turnaround
> . - Jack
>
> On 8/15/07 2:27 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:
>
> > Jack, I am writing something, with figures, which I will send later today. Here are a few relevant paragraphs for now. Jim
> >
> > The computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States and only after 2000.
> > [As explained in the e-mail sent out last week, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]
> > How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.
> >
> > :On 8/14/07, **Jack Kaye** <jack.a.kaye@nasa.gov> wrote:
> >
> > > Jim – thanks for sending this to me.
> > >
> > > We have an action to respond to a Congressional question about this.

Can you provide us with a relatively straightforward answer (with some #) that we can transmit? I don't think we need anything extensive or complex, but a relatively brief (but quantitative) "just the facts" summary would help. As a backup, it may be good if we could have some # in case we get asked for more detail (e.g., list of top 20 warm years, time series of global T for last 15 years and also for 1934 +/- 5 years).

Don is on travel, but may be checking e-mail.

Time scale is, of course, asap! - Jack

On 8/14/07 2:52 AM, "James Hansen" < jhansen@giss.nasa.gov> wrote:

> Don,
>
> These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.
>
> In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2001 and later, and only the United States.
>
> The flaw, even when present (in 2001-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.
>
> Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S . (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.
>
> Jim
>
> *The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they

based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and it has been so corrected.

On 8/13/07, **Donald Anderson** <donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> > wrote:

> Jim:
> FYI
> Any comment?
> Don
>
> ---
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov
> <mailto:Donald.Anderson-1@nasa.gov>
>
> ------ Forwarded Message
> **From:** "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov <mailto:svolz@nasa.gov> >
> **Date:** Mon, 13 Aug 2007 12:01:06 -0400
> **To:** "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >, "Maring, Hal (HQ-DK000)" <hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
> **Cc:** "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov <mailto:jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)" <dwayne.c.brown@nasa.gov>
> **Conversation:** <no subject>
> **Subject:** <no subject>
>
> Don et al.,
>
> I saw this on the NASA news summary today.
>
> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a*

syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.

Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.

The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/> <http://climateaudit.com/> labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that

would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

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NASA HQ, Mail Suite 3F71
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Subject: Fwd: Fw: CCNet: 141/2007 - 24 Aug TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 27 Aug 2007 11:45:47 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

See item 7

-------- Forwarded message --------
From: @sympatico.ca>
Date: Aug 27, 2007 8:46 AM
Subject: Fw: CCNet: 141/2007 - 24 Aug TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM
To: @renfrew.edu.on.ca, gallac@parl.gc.ca , dramsay.mpp.kirklandlake@liberal.ola.org, jhansen@giss.nasa.gov, leader@greenparty.ca , mharris@cfra.com

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From: *FOS Extracts <fosextracts@shaw.ca>*
Reply-To: *FOS Extracts <fosextracts@shaw.ca>*
To: *<Undisclosed-Recipient:;>*
Subject: *Fw: CCNet: 141/2007 - 24 Aug TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM*
Date: *Sun, 26 Aug 2007 18:24:33 -0600*

> **CCNet 141/2007 - 24 August 2007 -- Audiatur et altera pars**
>
> **TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM**
> ----------
>
>
> On September 28, 1955, a Category 5 hurricane named Janet slammed into Chetumal, on Mexico's Yucatan Peninsula, killing over 600 people. Hurricane Dean, another Category 5, and the third-strongest storm ever measured at landfall, hit in exactly the same place earlier this week (Tuesday, August 21,2007) and killed no one. Maximum winds in both storms were indistinguishable. Probably for the first time in human history, a Category 5 storm hit a populated area and everyone lived. Similar storms, huge storms, very different results. What's happening here?
> --World Climate Report, 23 August 2007
>
> Since the late 1960s, much of the North Atlantic Ocean has become less salty, in part due to increases in fresh water runoff induced by global warming, scientists say.
> --Michael Schirber, LiveScience, 29 June 2005
>
> The surface waters of the North Atlantic are getting saltier, suggests a new study of records spanning over 50 years. They found that during this time, the layer of water that makes up the top 400 metres has gradually become saltier. The seawater is probably becoming saltier due to global warming, Boyer says.
> --Catherine Brahic, New Scientist, 23 August 2007

> The treaty that will eventually replace the Kyoto Protocol on climate change could be a potpourri of legal obligations, nonbinding commitments and aid arrangements for the developing world, but each nation should choose its own course, the U.N.'s top climate official said Thursday.
> --Arthur Max, Associated Press, 23 August 2007
>
> Now we have arrived at the point where two formerly prestigious science journals, Nature and Science magazine, are continuously degrading themselves by operating a biased selection and peer-review process for papers and by publishing scandalously-flawed, alarmist papers and then by stifling rebuttals that expose these flaws. These journals do this in order to politically support a loose, worldwide, socialist-environmentalist coalition seeking to stifle future industrial development using the ruse of a man-made global warming crisis.
> --Paul Saunders, Bethlehem, PA, 23 August 2007

>
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>
> (1) TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM
> World Climate Report, 23 August 2007
>
> > (3) CLIMATOLOGY: THE MODERN ASTROLOGY THAT CAN EXPLAIN EVERYTHING
>
> (4) UN DREAMING: MOST CO2 EMISSION CUTS HAVE TO COME FROM DEVELOPING COUNTRIES
> Gerard Wynn, Reuters, 23 August 2007
>
> (5) UN CLIMATE CHIEF SEES PICK-AND-CHOOSE TREATY
> Arthur Max, Associated Press, 23 August 2007
>
> (6) GREENHOUSE WARMING: WRONG ALTITUDE AND LATITUDE DEPENDENCE?
> Lubos Motl, 23 August 2007
>
> (7) NASA SHAMBLES: HAS HANSEN MESSED UP AGAIN?
> Steve McIntyre, Climate Audit, 23 August 2007
>
> (8) AND FINALLY: WHY SCIENCE JOURNALISM IS LOSING ITS AUDIENCE
> Paul Saunders [prsaunde@enter.net]
>
>
>

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> (1) TAMING THE HURRICANE: AN ANTIDOTE TO CLIMATE ALARMISM

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> World Climate Report, 23 August 2007
> http://www.worldclimatereport.com/index.php/2007/08/23/taming-the-hurricane/
>
> On September 28, 1955, a Category 5 hurricane named Janet slammed into Chetumal, on Mexico's Yucatan Peninsula, killing over 600 people.
>
> Hurricane Dean, another Category 5, and the third-strongest storm ever measured at landfall, hit in exactly the same place earlier this week (Tuesday, August 21,2007) and killed no one. Maximum winds in both storms were indistinguishable. The hurricane-hunter pilot who flew through the eyewall of the storm Tuesday reported severe turbulence, which is a temporary loss of aircraft control. Probably for the first time in human history, a Category 5 storm hit a populated area and everyone lived.
>
> Because of its peculiar location, the Yucatan takes more big hurricane hits than just about anywhere else in the western hemisphere. When Mexico was dirt-poor, as it was in 1955, hurricanes could kill hundreds. They were warned, then, too. Hurricane-hunter planes also monitored Janet. Only one of these has ever been lost, and it as Janet was making landfall.
>
> Similar storms, huge storms, very different results. What's happening here?
>
> Since then, people in the Yucatan have learned to adapt. While storms like these used to kill hundreds, even thousands, we now have the technology to forecast their tracks, at least for the critical last 24 hours, with reasonable confidence. Forecasting the intensity is a bit trickier, but everyone in the hurricane business was pretty convinced that Dean was going to bomb out sometime before it hit land. After all, it was passing over the same region in which 1988 hurricane Gilbert set the record for the lowest barometric pressure ever measured in the Atlantic Basin.
>
> Gilbert was the second-strongest storm ever recorded at landfall, and also hit the Yucatan. While it was responsible for 202 deaths in Mexico, almost all of these were caused by mountain floods hundreds of miles away and days away from landfall.
>
> Adaptation includes technology, infrastructure, and response. National Hurricane Center forecasts and data are available to everyone. But the infrastructure to respond to a forecast hurricane costs money, and poor nations don't have it. Among other things, it requires good roads for evacuation.
>
> Perhaps even more important, adaptation to hurricanes or other natural disasters is political. No elected official wants to be blamed for hundreds of preventable deaths, so the nations that can afford it develop evacuation plans, open shelters, and deliver people from danger.
>
> When Janet killed hundreds, per-capita income in Mexico was less than a tenth of what it is now, when Dean killed no one.

>
> So why is it that people are wringing their hands about global warming causing more severe hurricanes and deaths?
>
> The best computer estimate for future hurricanes was published by Tom Knutson and Robert Tuleya in the Journal of Climate in 2004. They calculated that maximum winds should increase by about 6% over the next 75 years. Even this may be an overestimate because the method used assumes carbon dioxide—the main global warming emission—is increasing in the atmosphere about twice as fast as it actually is.
>
> Clearly, this small increase in hurricane strength is going to be dramatically overshadowed by adaptation as the developing world continues to develop. Mexico is a case in point.
>
> We see other adaptations to climate change in our cities. In the United States, cities with the most frequent heat waves have the fewest heat-related deaths, and heat-related deaths are themselves dropping, as our cities warm. Remember, a city doesn't need global warming to get hot. All it needs is a skyline, and a lot of blacktop and concrete to impede the flow of air and retain heat. But in our warming cities, just as with hurricanes in the Yucatan, frequency + affluence = adaptation.
>
> An odd example of this is that there is only one major U.S. city in which heat related deaths are increasing, and it is the coolest one in summer: Seattle.
>
> Anyone concerned about climate change should take a lesson from Hurricane Dean. Even if storms like this become more frequent in the future, people will adapt and survive if they have the financial resources. How silly it seems to take those resources away in futile attempts to "stop global warming"—which no one even knows how to do—when they could save lives by allowing people to adapt to our ever-changing climate.
>
> The truth is that money in the hand is a lot more useful than treaties on paper when it comes to sparing yourself and your family from bad weather. So people truly worried about climate change should be cheerleading for the global trade and economic development that will continue allowing us to adapt.
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> **(3) CLIMATOLOGY: THE MODERN ASTROLOGY THAT CAN EXPLAIN EVERYTHING**
>
> GLOBAL WARMING MAKES NORTH ATLANTIC LESS SALTY
>
> LiveScience, 29 June 2005
> http://www.livescience.com/environment/050629_fresh_water.html
>
> Michael Schirber
>
> Since the late 1960s, much of the North Atlantic Ocean has become less salty, in part due to increases in fresh water runoff induced by global warming, scientists say. Now for the first time researchers have quantified this fresh water influx, allowing them to predict the long-term effects on a "conveyor belt" of ocean currents.
>
> Climate changes in the Northern Hemisphere have melted glaciers and brought more rain, dumping more fresh water into the oceans, according to the analysis.
>
> One of the expected high-profile consequences is a rising sea that will swamp coastal communities....
>
> **GLOBAL WARMING MAKES NORTH ATLANTIC MORE SALTY**
>
> New Scientist, 23 August 2007
> http://environment.newscientist.com/article.ns?id=dn12528&feedId=online-news_rss20
>
> Catherine Brahic
>
> The surface waters of the North Atlantic are getting saltier, suggests a new study of records spanning over 50 years. And this might actually be good news for the effects of climate change on global ocean currents in the short-term, say the study's researchers.
>
> This is because saltier waters in the upper levels of the North Atlantic ocean may mean that the global ocean conveyor belt – the vital piece of planetary plumbing which some scientists fear may slow down because of global warming – will remain stable.
>
> The global ocean conveyor belt is the crucial circulation of ocean waters around the Earth. It helps drive the Gulf Stream and keeps Europe warm. The density of waters which drives the flow of ocean currents is dependent on temperature and

salinity, so any change in saltiness may have an impact.
>
> Tim Boyer of the US National Oceanographic Data Center and colleagues compiled salinity data gathered by fisheries, navy and research ships travelling across the North Atlantic between 1955 and 2006. They found that during this time, the layer of water that makes up the top 400 metres has gradually become saltier.
>
> The seawater is probably becoming saltier due to global warming, Boyer says. "We know that upper ocean is warming in the North Atlantic, so it stands to reason that there should be more evaporation, making waters more salty," he says.
>
> FULL STORY at http://environment.newscientist.com/article.ns?id=dn12528&feedId=online-news_rss20
>
>
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> **(5) UN CLIMATE CHIEF SEES PICK-AND-CHOOSE TREATY**
>
More bobbing and weaving from Mr De Boer - Ed

> Associated Press, 23 August 2007
> http://www.forbes.com/feeds/ap/2007/08/23/ap4050345.html
>
> By ARTHUR MAX
>
> AMSTERDAM, Netherlands - The treaty that will eventually replace the Kyoto Protocol on climate change could be a potpourri of legal obligations, nonbinding commitments and aid arrangements for the developing world, but each nation should choose its own course, the U.N.'s top climate official said Thursday.
>
> At the outset of a season of climate negotiations, Yvo de Boer, executive secretary of the U.N. Framework Convention on Climate Change, said countries such as the United States are mistaken if they dismiss the Kyoto process on the grounds it is forcing them into unwanted legal commitments.
>
> "Countries themselves are in the best position to decide how they can achieve a target to which they commit," he told The Associated Press from his headquarters in Bonn, Germany. "You should not seek to impose legally binding commitments on countries."
>
> At the same time, he said, it was up to the industrialized nations to take the lead in fighting global warming, and that binding commitments give a strong signal to energy investors on where to put their money.
>
> De Boer's comments appeared aimed at minimizing differences with the United States, which opted out of binding international agreements, but which is now trying to seize the initiative in shaping the next phase of world climate policy.
>
> The U.S. position has angered the European Union, which has adopted increasingly higher targets and imposed tough regulations on its member nations beyond their Kyoto commitments.
>
> President Bush has called a conference in Washington next month of the world's 15 biggest polluters, including India, China and several other countries not bound by the 1997 Kyoto Protocol, which expires in 2012. De Boer will head the U.N. delegation.
>
> That meeting will take place three days after a broader meeting on climate change summoned by U.N. Secretary-General Ban Ki-moon on Sept. 24 in New York. Both the Washington and New York talks are geared toward a major U.N. meeting in Bali, Indonesia, in December to discuss a successor agreement to Kyoto.
>
> The Kyoto agreement requires 35 industrial nations to cut their global-warming emissions 5 percent below 1990 levels by 2012. It also devised a carbon trading market and set up a system for nations to offset part of their obligations by sponsoring emission-reduction projects in developing countries. De Boer said 700 such projects - such as financing hydroelectric or wind power projects - are in the pipeline.
>
> De Boer said an important element in the post-Kyoto climate regime will be how countries can gain credit by helping the developing world.
>
> "It makes sense to get the biggest bang for your bucks, to identify the most cost-effective emissions reduction options around the world. The atmosphere doesn't care where you reduce emissions as long as you reduce emissions," he said.
>

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> **GREENHOUSE WARMING: WRONG ALTITUDE AND LATITUDE DEPENDENCE ?**
>
> Lubos Motl, 23 August 2007
> http://motls.blogspot.com/2007/08/greenhouse-warming-wrong-altitude-and.html
>
> Lord Monckton has written down a convincing paper showing that the greenhouse effect predicts a "hot spot" at certain rather high altitudes above the equatorial zones, something that isn't really observed:
>
> THE FACT of warming tells us nothing of the cause. Yet the scientific "consensus" is that, though the rapid climatic warming from 1906 to 1940 was a natural recovery from the historically low temperatures of the Little Ice Age, it is we who are chiefly to blame for the equally rapid warming from 1975 to the present.
>
> Since some climatologists challenge this consensus, can we settle the debate by predicting with models and then detecting by observation a characteristic "signature" in the climate data that allows us definitively to distinguish between anthropogenic and natural warming of the Earth's atmosphere? This paper answers that key question.
>
> FULL PAPER at http://scienceandpublicpolicy.org/monckton_papers/greenhouse_warming_what_greenhouse_warming_.html
>
>
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> NASA SHAMBLES: HAS HANSEN MESSED UP AGAIN?
>
> Climate Audit, 23 August 2007
> http://www.climateaudit.org/?p=1958
>
> By Steve McIntyre
>
> Here's something interesting: I've collated the GISS raw(dset=1) and GISS adjusted (dset=2) versions and then calculated the range of adjustments. The largest positive adjustment was over 8 deg C and the largest negative adjustment is greater than -6 deg C. I separated out the stations that had no adjustments (max adjustments under 0.01 deg C either way) and plotted their locations in the first figure. I then plotted figures showing stations with only positive adjustments, only negative adjustments and with two-way adjustments. (Nearly 40% of the 5990 stations with adjustments had zero adjustment.)
>
> FULL STORY at http://www.climateaudit.org/?p=1958
>
> ========== LETTERS =======
>
> **AND FINALLY: WHY SCIENCE JOURNALISM IS LOSING ITS AUDIENCE**
>
> Paul Saunders [prsaunde@enter.net]
>
> Dear Benny,
>
> I completely agree with your evaluation of the report by Matthew Nisbet (http://scienceblogs.com/framing-science/2007/08/over_the_past_30_yrs_the_propo.php) - "Science news is a real turn-off" because it is "Biased, Boring and Alarmist."
>
> I think the base period, the 1980s, Nisbet uses to measure the steep fall off in public interest in science news is a key time period because that is when the 1960s leftist campus radicals were attaining power inside the journalistic enterprise and able to implement what their professors had taught them, namely:
>
> 1.) Reason is illusory,
> 2.) Objectivity is impossible to achieve,
> 3.) Ethics has no absolute principles, behavior should be pragmatic,
> 4.) Capitalism and Big Corporations are always evil,
> 5.) Government expansion of power and more taxes are always good,
> 6.) Pristine nature untouched by man is the new God to worship,
> 7.) Therefore, write articles to support a collective "social" agenda, usually socialism
> and/or environmentalism.
>
> Now we have arrived at the point where two formerly prestigious science journals, Nature and Science magazine, are continuously degrading themselves by operating a biased selection and peer-review process for papers and by publishing

scandalously-flawed, alarmist papers and then by stifling rebuttals that expose these flaws. These journals do this in order to politically support a loose, worldwide, socialist-environmentalist coalition seeking to stifle future industrial development using the ruse of a man-made global warming crisis.
>
> This is just what the 1960s professors and campus radicals sought to achieve. It is little wonder people no longer want to read about "science," because it has ceased to be science.
>
> Paul Saunders
> Bethlehem, PA
> USA
>
> ----------
> CCNet is a scholarly electronic network edited by Benny Peiser. To subscribe, send an e-mail to listserver@livjm.ac.uk ("subscribe cambridge-conference"). Information circulated on this network is for scholarly and educational use only. The attached information may not be copied or reproduced for any other purposes without prior permission of the copyright holders. DISCLAIMER: The opinions, beliefs and viewpoints expressed in the articles and texts and in other CCNet contributions do not necessarily reflect the opinions, beliefs and viewpoints of the editor. http://www.staff.livjm.ac.uk/spsbpeis/
>

Subject: Re: new USHCN 1880-2005
From: James Hansen <jhansen@giss.nasa.gov>
Date: Mon, 27 Aug 2007 18:42:10 -0400
To: rruedy@giss.nasa.gov, Gavin Schmidt <gschmidt@giss.nasa.gov>, makis@giss.nasa.gov

This is excellent. This is consistent with the philosophy described in our 2001 paper, i.e., letting NOAA do the primary, labor-intensive task of cleaning U.S. station data. But it is appropriate for us to do our own urban correction using satellite night lights. I believe that they (NOAA) have underestimated urban warming effects, so it is better that we keep our own urban correction.

By the way, in case their is any question about why we get into this (surface temperature analysis) business at all, given NOAA's responsibilities: originally (in the 1970s) this was because there was no global analysis, the only available analysis being Murray Mitchell's, which only went down to 20N latitude. We showed that Southern Hemisphere coverage was actually useful, because of the large correlation distance of anomalies.

Funny thing is that, despite the much larger (person-wise) efforts that the other groups put into this, our analysis scheme still proved useful in 2005. The reason that we found 2005 (slightly) warmer than 1998 was that we included the full Arctic. And satellite IR data suggest that, if anything, our Arctic anomalies underestimate the actual positive anomalies there.

Jim

At 05:49 PM 8/27/2007, Reto Ruedy wrote:

> Gavin,
>
> Yes it was done properly this time - also, just looking at the annual
> US-means, that method seems to do pretty well. Steve will find the few
> stations where it didn't.
>
> I thought of taking any detailed descriptions out of the "Background"
> section with links to separate pages, where the processes are carefully
> described and which are updated, whenever a change is made, noting the
> date when the change occurred. That should satisfy most people.
>
> Rounding to the nearest .1C was Phil Jones' suggestion; I realize that
> we have to wait a while to do so.
>
> Reto
>
> On Mon, 2007-08-27 at 17:14 -0400, Gavin Schmidt wrote:
> > that's one less thing to worry about!
> >
> > I wouldn't recommend changing the format - any such such change is bound
> > to be interpreted as an attempt to spin the numbers.
> >
> > I take it that the 2006, 2007 numbers from GHCN are offset so that there
> > is no discontinuity when going from USHCN to GHCN as you did for the

> post 2000 numbers in the last analysis?
>
> If and when Jim decides to adopt this, I also recommend that we have a
> specific page outlining the change and the differences it makes so that
> there is no accusation that we're quietly fiddling the numbers.
>
> thanks,
>
> Gavin
>
> On Mon, 2007-08-27 at 17:04, Reto Ruedy wrote:
>> No - but I needed an extra digit to decide that question (1.244 vs
>> 1.238C). Maybe, we'll switch to a single digit in the US-table, then we
>> have 3 years in the number 1 position.
>>
>> Reto
>>
>> On Mon, 2007-08-27 at 16:39 -0400, Gavin Schmidt wrote:
>>> but did 1934 and 1998 swap places? ;)
>>>
>>> gavin
>>>
>>> On Mon, 2007-08-27 at 16:37, Reto Ruedy wrote:
>>>> Hi Jim,
>>>>
>>>> Over the weekend, I used the newest version of the USHCN data to redo
>>>> our analysis; I did it twice, with and without the data USHCN filled in.
>>>>
>>>> No surprises; between 1920 and 2005 the change in the US ann. means was
>>>> less than 0.02 C, the largest difference was in the 1880's (<0.16 C).
>>>> With the new data, the US trend will be slightly higher.
>>>>
>>>> The only interesting thing was, that my first attempt to process these
>>>> data failed. It turned out that our program could not handle the attempt
>>>> to remove data that were not present.
>>>>
>>>> All went fine when I took the US stations off our list of manual
>>>> corrections.
>>>>
>>>> It seems that all our manual deletions of parts of USHCN data were also
>>>> either deleted or modified in the new USHCN data. Their more rigorous
>>>> purging of odd-looking beginnings of station records seems to be the
>>>> main reason for the changes.
>>>>
>>>> I suggest, we switch to the new USHCN data for future updates. It does
>>>> not matter much to keep or not to keep USHCN fillers; not keeping them
>>>> is a little more in line of what we did so far.
>>>>
>>>> Reto

> > > >
> > > >
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: The 1934 flap
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 27 Aug 2007 21:03:20 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>,
@aol.com" < @aol.com>

Yes, I should make clear what I meant. I know that if you take the linear trend the U.S. temperature change is less than the global trend. But if you compare the mean for the past 10 years to the mean for either 1880-1900 or 1880-1920, the warming is about 1.0C (1.8F) for the U.S. and 0.8C for the global mean. Ten years is enough to pretty well average out the large year-to-year fluctuations, so I think it is a fair way to look at the magnitude of the warming. In a case where you have a large change near the end of the record the linear trend is not a very good way to look at the magnitude of the change. Jim

--------- Forwarded message ---------
From: **Makiko Sato** <makis@giss.nasa.gov>
Date: Aug 27, 2007 6:35 PM
Subject: Re: The 1934 flap
To: James Hansen <jhansen@giss.nasa.gov>
Cc: rruedy@giss.nasa.gov

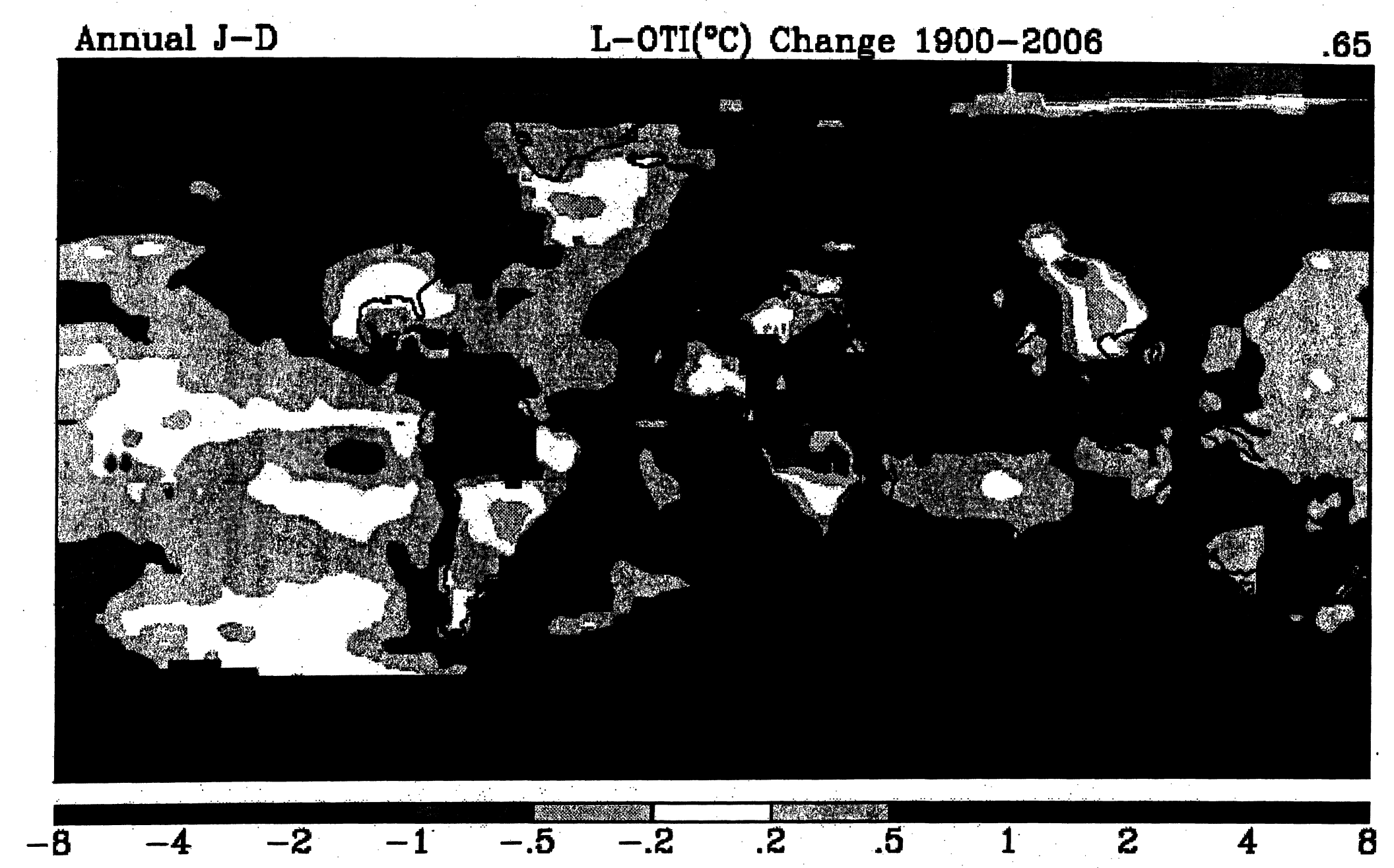
>
>
>Note also, although the year to year fluctuations are large for an
>area the size of the contiguous states, the long-term (century
>scale) warming has been as large for the U.S. as for the global mean
>(actually a bit larger).
>
>Jim Hansen
>
Jim,

Fig 1: Global map

The global trend is 0.65 (and 0.64 for 1906-2006), and the US averages yellow, which means about 0.35, almost half of the globe, but why did you write as above?

Makiko

—14f4f3b.jpg———————————————————————————————————————


Annual J-D
L-OTI(°C) Change 1900-2006
.65
-8
-4
-2
-1
-.5
-.2
.2
.5
1
2
4
8

Subject: Re: Re: Sea Level Rise, Green Greenland & Fantabulous Inference
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 28 Aug 2007 12:27:25 -0400
To: "Lonnie Thompson" <thompson.3@osu.edu>
CC: "Darnell Cain" <dcain@giss.nasa.gov>

Hi Lonnie,

O.K., I am trying to avoid commitments because I am so far behind on things, but it would be good to see you again. Let's make it near the end of the periods you mention, i.e., at the beginning of May.

Will try to call you now.

Jim

On 8/28/07, **Lonnie Thompson** <thompson.3@osu.edu> wrote:

> Hi Jim: Understand you have had a busy summer. I had a few issues I would like to touch base with you on.
>
> (1) Concerns telephone call with Ralph Cicerone concerning Steve McIntyre, data request and tactics.
>
> (2) Would like to get you to Ohio State in 2008 to give the Bownocker Lectures. We are pretty open on times. The lectures are scheduled on Thursday but any Thursday between Feb. 21and March 6th or between March 27 and May 8th would work. There are two lecture:
> one at 4:00 PM which is more technical and a public lecture a 8:00 PM.
> These would be in our new School of Earth Sciences.
> All expenses would be paid and there is a $1000.00 honorarium. More important, I know how busy you are and the toll that lectures take.
> I will be on a 10 day major city Einstein Lecture tour in China in October but feel sometimes it is the best way to get the message out one person at time.
> Hope you can fit us in your busy schedule next spring. Appreciate very much what you do in getting the message to the public.
> Please let me know if you can fit this into your schedule.
>
> You can telephone my direct line:
>
> Best wishes,
>
> Lonnie

Subject: Re: Re: Sea Level Rise, Green Greenland & Fantabulous Inference
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 28 Aug 2007 13:55:54 -0400
To: "Lonnie Thompson" <thompson.3@osu.edu>, "Darnell Cain" <dcain@giss.nasa.gov>

Let's make it May 1. Jim

On 8/28/07, **Lonnie Thompson** <thompson.3@osu.edu> wrote:

Hi Jim: Good talking with you. I will give to two possible dates for the Bownocker lecture, April 24, 2008 or May 1st, 2008. Please let me know what works for you and I will get it on the Academic calendar.

Thanks again!

Lonnie

At 12:27 PM 8/28/2007, you wrote:
>Hi Lonnie,
>
>O.K., I am trying to avoid commitments because I am so far behind on
>things, but it would be good to see you again. Let's make it near the end
>of the periods you mention, i.e., at the beginning of May.
>
>Will try to call you now.
>
>Jim
>
>
>On 8/28/07, Lonnie Thompson
><<mailto:thompson.3@osu.edu>thompson.3@osu.edu> wrote:
>Hi Jim: Understand you have had a busy summer. I had a few issues I
>would like to touch base with you on.
>
>(1) Concerns telephone call with Ralph Cicerone concerning Steve
>McIntyre, data request and tactics.
>
>(2) Would like to get you to Ohio State in 2008 to give the Bownocker
>Lectures. We are pretty open on times. The lectures are scheduled
>on Thursday but any Thursday between Feb. 21and March 6th or between March
>27 and May 8th would work. There are two lecture:
>one at 4:00 PM which is more technical and a public lecture a 8:00 PM.
>These would be in our new School of Earth Sciences.
>All expenses would be paid and there is a $1000.00 honorarium. More
>important, I know how busy you are and the toll that lectures take.
>I will be on a 10 day major city Einstein Lecture tour in China in October
>but feel sometimes it is the best way to get the message out one person at
>time.
>Hope you can fit us in your busy schedule next spring. Appreciate very

>much what you do in getting the message to the public.
>Please let me know if you can fit this into your schedule.
>
>You can telephone my direct line:
>
>
>Best wishes,
>
>Lonnie
>
>

Subject: Re: USA temperatures - question from USA TODAY
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 29 Aug 2007 03:41:30 -0400
To: "Rice, Doyle" <drice@usatoday.com>, "Makiko Sato" <makis@giss.nasa.gov>
CC: James.E.Hansen@nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>

Doyle,

We start from NCDC raw data, but the analysis method differs, as described in our 2001 paper. As you can discern from that paper, the factor that probably makes the difference regarding our relative rankings of 1934 and 1998 is the method of correcting for urban warming effects, ours yielding a somewhat larger correction. However, the end results are in very good agreement, as you can see by looking at the temperature curves.

Makiko, would you please make available your recent figure with global and U.S. temperature curves? Doyle, you will see that these years are practically indistinguishable. There is no way for anyone to be certain which year was warmer.

Jim

On 8/28/07, **Rice, Doyle** <drice@usatoday.com> wrote:

> Dr. Hansen
>
> We're trying to clarify some points about the US historical temperature record.... Does NASA use a different data set from NCDC? With the recent controversy, we want to be sure we're not comparing apples to oranges as we cover this.
>
> According to NCDC, 2006 was the second-warmest after 1998-
>
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
>
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html
>
> But I see in theNASA data, with the recent correction, 1934 is the warmest, with 1998 second followed by 1921 and 2006.
>
> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
>
> Thanks,

Doyle Rice

Weather Editor

USA TODAY

Subject: Re: USA temperatures - question from USA TODAY
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 29 Aug 2007 08:47:31 -0400
To: rruedy@giss.nasa.gov
CC: "Rice, Doyle" <drice@usatoday.com>, "Makiko Sato" <makis@giss.nasa.gov>, James.E.Hansen@nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>

Reto, thanks, good points. Jim

On 8/29/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

Jim,

You could mention one other difference:

NCDC's curve is based exclusively on the 1221 closely examined and carefully corrected USHCN full data records, GISS's curve was culled from our GLOBAL analysis, i.e. from global maps produced by combining all available station records; this includes the part of the USHCN data that could be downloaded from USHCN's web site (ending currently with year 2005), but it also uses the remaining 541 US stations, and as far as the US mean is concerned, it is also impacted by the non-US stations located within 1200 km of the US border.

Reto

On Wed, 2007-08-29 at 03:41 -0400, James Hansen wrote:
> Doyle,
>
> We start from NCDC raw data, but the analysis method differs, as
> described in our 2001 paper. As you can discern from that paper, the
> factor that probably makes the difference regarding our relative
> rankings of 1934 and 1998 is the method of correcting for urban
> warming effects, ours yielding a somewhat larger correction. However,
> the end results are in very good agreement, as you can see by looking
> at the temperature curves.
>
> Makiko, would you please make available your recent figure with global
> and U.S. temperature curves? Doyle, you will see that these years are
> practically indistinguishable. There is no way for anyone to be
> certain which year was warmer.
>
> Jim
>
>
> On 8/28/07, Rice, Doyle < drice@usatoday.com> wrote:
> Dr. Hansen
>
>
>

> We're trying to clarify some points about the US historical
> temperature record.... Does NASA use a different data set from
> NCDC? With the recent controversy, we want to be sure we're
> not comparing apples to oranges as we cover this.
>
>
>
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>
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
>
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html
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> But I see in theNASA data, with the recent correction, 1934
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> http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
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>
> Thanks,
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>
> Doyle Rice
>
> Weather Editor
>
> USA TODAY
>
>
>
-

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: USA temperatures - question from USA TODAY
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 29 Aug 2007 16:12:20 -0400
To: "Rice, Doyle" <drice@usatoday.com>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "James Hansen" <jhansen@giss.nasa.gov>

Well, I guess that I would say it a bit differently.

Our method of analysis has features that are different than the analyses of the other groups. In some cases the differences have a substantial impact.

For example, we extrapolate station measurements as much as 1200 km. This allows us to include results for the full Arctic. In 2005 this turned out to be important, as the Arctic had a large positive temperature anomaly. We thus found 2005 to be the warmest year in the record, while the British did not and initially NOAA also did not. Independent satellite IR measurements showed that our extrapolations of anomalies into the Arctic were conservative. I am very confident that our result was the correct one in that instance.

Also, as we show in our 2001 paper, our urban warming correction in the U.S. differs from the NOAA correction (we have a larger adjustment, which decreases recent temperatures relative to last century). I would not claim that one is superior to the other, but the different results provide one conservative measure of uncertainty. In general it has proven very useful to have more than one group do the analysis.

Also it should be noted that the different groups have cooperated in a very friendly way to try to understand different conclusions when they arise. You will see that we had co-authors from the other groups on our 2001 paper. And in general it is a bad idea to anoint any group as being THE authority. Science doesn't usually work best that way.

Jim

On 8/29/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Doyle,
>
> Since this is a technical question and Dr. Hansen is busy this
> afternoon, I'll answer it:
>
> No, your statement is NOT correct; to get the US means, NCDC's procedure
> of only using the best stations is more accurate. If that were our goal,
> we would proceed in the same way. Actually, whenever we report on US
> means in our publications, we recompute all US means using only USHCN
> data.
>
> My recommendation to you is to continue using NCDC's data for the US
> means and Phil Jones' data for the global means. Our method is geared to
> getting the global mean and large regional means correctly enough to
> assess our model results.

We are basically a modeling group and were forced into rudimentary analysis of global observed data in the 70's and early 80's since nobody else was doing that job at the time. Now we happily combine NCDC's and Hadley Center's data to get what we need to evaluate our model results. For that purpose, what we do is more than accurate enough. But we have no intention to compete with either of the other two organizations in what they do best.

Sincerely,

Reto

On Wed, 2007-08-29 at 12:36 -0400, Rice, Doyle wrote:
> Jim
>
> Thank you for sending this clarification. I also received the graphs
> from Makiko.
>
>
>
> So is it correct to say that NASA's data is more accurate than NCDC's
> since it has more sources? In the media, it would be ideal to refer
> to one source rather than two. Traditionally we've used NCDC's data.
>
>
>
> And globally, we usually use the Hadley Centre data...
>
> http://www.cru.uea.ac.uk/cru/info/warming/
>
>
>
> Doyle Rice
>
>
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> _____
> From: @ .com [mailto: @ com] On Behalf
> Of James Hansen
> Sent: Wednesday, August 29, 2007 8:48 AM
> To: rruedy@giss.nasa.gov
> Cc: Rice, Doyle; Makiko Sato; James.E.Hansen@nasa.gov; Reto Ruedy
> Subject: Re: USA temperatures - question from USA TODAY

>
>
>
>
> Reto, thanks, good points. Jim
>
> On 8/29/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>
> Jim,
>
> You could mention one other difference:
>
> NCDC's curve is based exclusively on the 1221 closely examined and
> carefully corrected USHCN full data records, GISS's curve was culled
> from our GLOBAL analysis, i.e. from global maps produced by combining
> all available station records; this includes the part of the USHCN
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> that could be downloaded from USHCN's web site (ending currently with
> year 2005), but it also uses the remaining 541 US stations, and as far
> as the US mean is concerned, it is also impacted by the non-US
> stations
> located within 1200 km of the US border.
>
> Reto
>
> On Wed, 2007-08-29 at 03:41 -0400, James Hansen wrote:
> > Doyle,
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> > We start from NCDC raw data, but the analysis method differs, as
> > described in our 2001 paper. As you can discern from that paper,
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> > warming effects, ours yielding a somewhat larger
> correction. However,
> > the end results are in very good agreement, as you can see by
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> >
> > Makiko, would you please make available your recent figure with
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> > and U.S. temperature curves? Doyle, you will see that these years
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> > practically indistinguishable. There is no way for anyone to be
> > certain which year was warmer.
> >
> > Jim
> >
> >

> > On 8/28/07, Rice, Doyle < drice@usatoday.com> wrote:
> > Dr. Hansen
> >
> >
> >
> > We're trying to clarify some points about the US historical
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> from
> > NCDC? With the recent controversy, we want to be sure we're
> > not comparing apples to oranges as we cover this.
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> >
> >
> > According to NCDC, 2006 was the second-warmest after 1998-
> >
> >
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
> >
> >
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html
> >
> >
> >
> > But I see in theNASA data, with the recent correction, 1934
> > is the warmest, with 1998 second followed by 1921 and 2006.
> >
> > http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
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> >
> >
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> >
> > Thanks,
> >
> >
> >
> > Doyle Rice
> >
> > Weather Editor
> >
> > USA TODAY
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> > --
> Reto Ruedy < rruedy@giss.nasa.gov>
>
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>

>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Fwd: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 31 Aug 2007 10:05:07 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Sorry, I think that you were not on the distribution. Jim

--------- Forwarded message ---------
From: **James Hansen** < jhansen@giss.nasa.gov>
Date: Aug 26, 2007 7:15 PM
Subject: Re: <no subject>
To: Jack Kaye <jack.a.kaye@nasa.gov>
Cc: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov>, Leslie McCarthy <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" < michael.h.freilich@nasa.gov>, Ellen Cohen <ellen.cohen-1@nasa.gov>

Hi Jack,

Just back It seems to me that the paragraph is basically o.k., but I would like Reto and Makiko to verify that.

The "ranking" of individual years is something that we try to discourage media from pursuing, especially for an area the size of contiguous U.S. (2% of globe). There are too many years that are statistically indistinguishable.

Also, the results change as new stations are added to the record or old ones are changed/corrected. Indeed, WMO and/or NOAA add previously unreported data every month and often correct errors or make adjustments to some data from prior months. In general each month the data set that we obtain differs (slightly) in the past, as well as having the addition of another month. So it is like an election in which you continually have recounts and absentee ballots added. In the case of an election, change of order makes a difference, as you have to have a winner. But in the temperature analysis, in the case of razor thin differences, these flips have no physical significance (only an impact is when an eagle-eyed contrarian finds something that can be used as fodder for whatever ends they have).

Jim

On 8/23/07, **Jack Kaye** <jack.a.kaye@nasa.gov > wrote:

> Jim - in attempting to close the loop on this so we can deal with the legislative action, I wanted to see if we could come up with any more quantitative information. I looked at the longer text that you had the link to ("The Real Deal: Usufruct & the Gorilla).
>
> First, it appears that the "XX July 2007" in your message below should be 7 August 2007.
>
> In terms of 1934 vis a vis the more recent years, the key data I see from your text that may be worth citing are:
>
> • The four warmest US years on record were 1921, 1934, 1998, and 2006
> • The mean temperature anomaly in the US was 1.25 deg C in 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree difference between the two, which is smaller than the uncertainty in the actual numbers.
> • In 1934 the US was warm relative to much of the rest of the word, while in 2006 the world was much warmer.

If these points are enough, we can try to get them into a short paragraph. How about this?

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Would you be okay with this? If not, do you have suggestions? I don't know that we'd need much more than this!

On 8/15/07 6:18 AM, "Jack Kaye" <jack.a.kaye@nasa.gov> wrote:

> Jim - thanks for sending. I'll watch for next installment. I appreciate the prompt turnaround
> - Jack

> On 8/15/07 2:27 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:
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> > How big an error did this flaw cause? That is shown by the before and after results in Figure

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> Jim – thanks for sending this to me.
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> We have an action to respond to a Congressional question about this. Can you provide us with a relatively straightforward answer (with some #) that we can transmit? I don't think we need anything extensive or complex, but a relatively brief (but quantitative) "just the facts" summary would help. As a backup, it may be good if we could have some # in case we get asked for more detail (e.g., list of top 20 warm years, time series of global T for last 15 years and also for 1934 +/- 5 years).
>
> Don is on travel, but may be checking e-mail.
>
> Time scale is, of course, asap! - Jack
>
> On 8/14/07 2:52 AM, "James Hansen" < jhansen@giss.nasa.gov> wrote:
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> > Don,
> >
> > These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.
> >
> > In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2001 and later, and only the United States.
> >
> > The flaw, even when present (in 2001-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.
> >
> > Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S . (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over

several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.

Jim

*The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and it has been so corrected.

On 8/13/07, **Donald Anderson** <donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> > wrote:

> Jim:
> FYI
> Any comment?
> Don
>
> ---
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov
> <mailto:Donald.Anderson-1@nasa.gov>
>
> ------ Forwarded Message
> **From:** "Volz, Stephen M. (HQ-DK000)" <
> svolz@nasa.gov
> <mailto:svolz@nasa.gov> >
> **Date:** Mon, 13 Aug 2007 12:01:06 -0400
> **To:** "Anderson, Donald (HQ-DK000)" <
> donald.anderson-1@nasa.gov
> <mailto:donald.anderson-1@nasa.gov>
> >, "Maring, Hal (HQ-DK000)" <
> hal.maring@nasa.gov
> <mailto:hal.maring@nasa.gov> >
> **Cc:** "Kaye, Jack A. (HQ-DK000)" <
> jack.a.kaye@nasa.gov
> <mailto:jack.a.kaye@nasa.gov> >,
> "Brown, Dwayne C. (HQ-NB060)" <
> dwayne.c.brown@nasa.gov>
> **Conversation:** <no subject>
> **Subject:** <no subject>

Don et al.,

I saw this on the NASA news summary today.

> ***Columnist Notes Changes In NASA's Temperature Data.*** *In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.*
>
> *Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.*
>
> *The "hottest year on record" is no longer 1998, but 1934. Another alleged sweltering, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.*
>
> *So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com*

<http://climateaudit.com/>
<http://climateaudit.com/>
labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

Dr. Jack A. Kaye
Assoc. Director for Research
Earth Science Division
Science Mission Directorate
NASA HQ, Mail Suite 3F71
Washington, DC 20546
Phone: 202-358-2559
Fax: 202-358-3172
E-mail: Jack.A.Kaye@nasa.gov
<mailto:Jack.A.Kaye@nasa.gov>

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Subject: Fwd: Fwd: <no subject>
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 31 Aug 2007 12:01:02 -0500
To: "Darnell Cain" <dcain@giss.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Jack Kaye" <jack.a.kaye@nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

The only additional minor comment from Reto/Makiko is one sentence, as indicated below. Jim

--------- Forwarded message ---------
From: **Reto Ruedy** < rruedy@giss.nasa.gov>
Date: Aug 31, 2007 10:42 AM
Subject: Re: Fwd: <no subject>
To: James Hansen <jhansen@giss.nasa.gov >
Cc: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>

Jim,

The only factual inaccuracy is the years affected by the discontinuity:
So I would change Jack's sentence that starts with:

"The flaw affected only ..."

I would replace the end "and only after 2000" by "and only for years 2000-present"

or something like that.

Reto

On Fri, 2007-08-31 at 10:05 -0500, James Hansen wrote:
> Sorry, I think that you were not on the distribution. Jim
>
> --------- Forwarded message ---------
> From: James Hansen <jhansen@giss.nasa.gov>
> Date: Aug 26, 2007 7:15 PM
> Subject: Re: <no subject>
> To: Jack Kaye < jack.a.kaye@nasa.gov>
> Cc: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov>,
> Leslie McCarthy < lnolan@giss.nasa.gov>, "Freilich, Michael H.
> (HQ-DK000)" <michael.h.freilich@nasa.gov>, Ellen Cohen
> < ellen.cohen-1@nasa.gov>
>
> Hi Jack,
>
> Just back : It seems to me that the paragraph is basically
> o.k., but I would like Reto and Makiko to verify that.
>

> The "ranking" of individual years is something that we try to
> discourage media from pursuing, especially for an area the size of
> contiguous U.S. (2% of globe). There are too many years that are
> statistically indistinguishable.
>
> Also, the results change as new stations are added to the record or
> old ones are changed/corrected. Indeed, WMO and/or NOAA add
> previously unreported data every month and often correct errors or
> make adjustments to some data from prior months. In general each
> month the data set that we obtain differs (slightly) in the past, as
> well as having the addition of another month. So it is like an
> election in which you continually have recounts and absentee ballots
> added. In the case of an election, change of order makes a
> difference, as you have to have a winner. But in the temperature
> analysis, in the case of razor thin differences, these flips have no
> physical significance (only an impact is when an eagle-eyed contrarian
> finds something that can be used as fodder for whatever ends they
> have).
>
> Jim
>
>
> On 8/23/07, Jack Kaye < jack.a.kaye@nasa.gov > wrote:
> Jim – in attempting to close the loop on this so we can deal
> with the legislative action, I wanted to see if we could come
> up with any more quantitative information. I looked at the
> longer text that you had the link to ("The Real Deal: Usufruct
> & the Gorilla).
>
> First, it appears that the "XX July 2007" in your message
> below should be 7 August 2007.
>
> In terms of 1934 vis a vis the more recent years, the key data
> I see from your text that may be worth citing are:
>
> • The four warmest US years on record were 1921, 1934, 1998,
> and 2006
> • The mean temperature anomaly in the US was 1.25 deg C in
> 1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree
> difference between the two, which is smaller than the
> uncertainty in the actual numbers.
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> word, while in 2006 the world was much warmer.
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> If these points are enough, we can try to get them into a
> short paragraph. How about this?
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> station data and new satellite sea surface temperature data
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> Hansen in a peer-reviewed publication from 2001. The flaw
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> 2000. As explained by Dr. Hansen in an e-mail sent out on
> August 10, one of the improvements made in the 2001 analysis
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> globe.
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>
> ------ Forwarded
> Message
> From: "Volz, Stephen
> M. (HQ-DK000)" <
> svolz@nasa.gov
> <mailto: svolz@nasa.gov> >
> Date: Mon, 13 Aug 2007
> 12:01:06 -0400
> To: "Anderson, Donald
> (HQ-DK000)" <
> donald.anderson-1@nasa.gov <mailto: donald.anderson-1@nasa.gov> >,
"Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto: hal.maring@nasa.gov> >
> Cc: "Kaye, Jack A.
> (HQ-DK000)" <
> jack.a.kaye@nasa.gov
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dwayne.c.brown@nasa.gov>
> Conversation: <no
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> and Space
> Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings — albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."
>
> And he goes on and
> on....
>
> Does anyone know what
> this guy is talking
> about? I checked the
> NASA website
> http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.
>
> Stephen Volz, Ph.D.
> Program Executive,
> Science Mission
> Directorate
> Suite 3B74
> NASA Headquarters
>
> "Try not. Do, or do
> not. There is no
> try."
> - Yoda, Jedi Master
>
>
> ------ End of
> Forwarded Message
>
>
>
>
> Dr. Jack A. Kaye
> Phone:

> 202-358-2559
> Assoc. Director for Research
> Fax: 202-358-3172
> Earth Science Division
> E-mail:
> Jack.A.Kaye@nasa.gov
> <mailto:Jack.A.Kaye@nasa.gov>
> Science Mission Directorate
> NASA HQ, Mail Suite 3F71
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Reto Ruedy <rruedy@giss.nasa.gov>

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From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 31 Aug 2007 12:21:52 -0500
To: kelly.j.farrell@nasa.gov, "Franco Einaudi" <Franco.Einaudi@nasa.gov>
CC: JackKaye <jkaye@hq.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Larry Travis" <ltravis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

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(and add Larry Travis to cc)

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To: Darnell Cain <dcain@giss.nasa.gov>, Leslie McCarthy < lnolan@giss.nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato < makis@giss.nasa.gov>

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Cc: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy < cdrar@giss.nasa.gov>

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> only 2001 and later, and only
> the United States.
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> The flaw, even when present
> (in 2001-2006, in the U.S.)
> was minor, at most a few
> thousandths of a degree on
> global mean and about 0.15C in
> the U.S. Contrary to some
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> it. The claim in the news
> reports that suddenly 1934 has
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>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and
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> Science Mission
> Directorate
> NASA HQ
> Washington, DC,
> 20546-0001
> 202-358-1432 Fax:
> x2770
> email:
> Donald.Anderson-1@nasa.gov <mailto: Donald.Anderson-1@nasa.gov>
>
>
> ----- Forwarded
> Message
> From: "Volz, Stephen
> M. (HQ-DK000)" <
> svolz@nasa.gov
> <mailto: svolz@nasa.gov> >
> Date: Mon, 13 Aug 2007
> 12:01:06 -0400
> To: "Anderson, Donald
> (HQ-DK000)" <
> donald.anderson-1@nasa.gov <mailto: donald.anderson-1@nasa.gov> >,
"Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto: hal.maring@nasa.gov> >
> Cc: "Kaye, Jack A.
> (HQ-DK000)" <
> jack.a.kaye@nasa.gov
> <mailto: jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)"
< dwayne.c.brown@nasa.gov>
> Conversation: <no
> subject>
> Subject: <no subject>
>
> Don et al.,
>
> I saw this on the NASA
> news summary today.

> Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.
>
> Then again, you might not. They're not issuing any

> press releases about it. But they have quietly revised their All-Time Hit Parade for U.S. temperatures.
>
> The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century — 2000, 2002, 2003, 2004 — plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge

> SUVs with the
> air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.
>
> So why is 1998
> no longer
> America's
> record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/> <http://climateaudit.com/> labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "d
> ...

[Message clipped]

Subject: Re: WSJ Editorial August 29
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 31 Aug 2007 16:34:27 -0500
To: "Halpern, David (HQ-DA000)" <david.halpern@nasa.gov>
CC: "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>, "Jack Kaye" <jack.a.kaye@nasa.gov>

Hi David,

Thanks for being concerned about this. WSJ clearly has objectives other than straight reporting.

Two clarifications to the below seem needed:

1) There was no change in the data processing. We pride ourselves on not continually changing the processing method. The last change was in 2001, as defined in the paper published then. We just put in the new data sets as they are updated every month by WMO and NOAA. What happened was that in 2001 we decided to use NOAA-adjusted data for the U.S. (USHCN, United States Historical Climatology Network) data, because Tom Karl et al. had gone to a lot of trouble (using station-by-station "meta-data") to correct for station moves, change of the time-of-day at which the records are read by the observers, etc. Unfortunately, we did not realize that USHCN data would not be available in near-real-time, while the WMO data for the same stations (same station ID numbers) were available (but excluding the NOAA adjustments), so the analysis picked up the unadjusted WMO data (from 2000 on) and tagged it onto the NOAA records (which went through 1999).

2) This should not be blamed on "a technician". As the person who devised the analysis procedure and as first author on the papers, I am responsible for checking the results. The way you catch these problems is by looking at the data. In fact I look at graphs and maps of the temperature anomalies each month, but I didn't notice this problem. The discontinuity at some individual stations was detectable, which is how McIntyre found it, but I did not make such graphs (there are thousands of stations). Because some stations had positive discontinuities and some negative, the flaw was small in either the line graphs of mean temperature or the maps (where the temperature at any point is based on many stations) that I look at. Because the flaw amounted to about 0.15C over the U.S. and 0.003C globally, it was much smaller than natural variability, so not detectable that way.

Jim

On 8/31/07, **Halpern, David (HQ-DA000)** <david.halpern@nasa.gov> wrote:

> Jim,
>
> The email messages below indicate that NASA's Earth Science Division may be willing to recommend a NASA response to the WSJ editorial for its attack on NASA science.
>
> Do you think this is a wise move? If "yes", I'm willing to prepare some preliminary text for your review before I send it to Mike Freilich. Would you please send me a sentence about the change in data processing methodology that occurred on processing data for 2000 and afterwards. Also, why was this new algorithm applied to only the U.S. data? What were the annual differences in global annual mean temperature in 2000-2006 between the values computed with the old and new methodologies?
>
> Best regards.

Dave
(In case you want to call me, my number is

From: Freilich, Michael H. (HQ-DK000)
Sent: Thu 8/30/2007 2:36 PM
To: Halpern, David (HQ-DA000)
Subject: Re: Science in the News: August 29

Understand. Please remind me again on Tuesday when I get back. If you want to work on a draft response, feel free.

...Mike F.

On 8/30/07 10:17 AM, "Halpern, David (HQ-DA000)" <david.halpern@nasa.gov> wrote:

> Michael,
>
> A NASA response to the WSJ editorial is a unique opportunity to inform a large scientific and non-scientific population about the scientific method and that NASA science is conducted with openness, transparency, and the highest standards of excellence.
>
> NASA (preferably Griffin) should refute the WSJ claim that NASA science has blunders and therefore cannot be trusted. NASA should inform the WSJ, which should have an uncanny knowledge of data processing errors, including those caused by humans, in statistical analysis of dynamic time series, that an inadvertent error occurred in processing the data in 2000 and subsequent years when a technician unknowingly used a different algorithm to process the temperature data over the United States. As a good steward of the scientific method, NASA had made public the procedure it uses to analyze the data, which allowed everyone to improve the methodology, and then made the correction the day NASA was informed. NASA immediately informed the world through the Internet following the scientific culture of openness and transparency. The negligible magnitude of the error associated with data over the United States did not change the result of the global annual mean surface air temperature, leaving 1998 the second warmest year and 2005 the warmest year since the instrumental record began 125 years ago. In addition, the WSJ incorrectly stated that the NASA data to not confirm a global warming trend in this decade (e.g., see http://lwf.ncdc.noaa.gov/img/climate/research/2005/ann/global-blended-temp-pg.gif). NASA's response should be coordinated with GISS, the owner of the temperature data set.
>
> I may be over reacting. The action of doing nothing probably does no harm unless each time NASA science makes an inadvertent negligible error the WSJ (and others) claim that they told everyone that NASA science contains blunders. This could become a disaster for science.
>
> A benefit of a NASA response is building a NASA science team showing that an attack on science is an attack on all.
>
> I recall that Griffin responded to the Abbott-Haymet-Luyten article in the Washington Post.
>
> Dave
>
> On 8/29/07 2:03 PM, "Jack Kaye" <jack.a.kaye@nasa.gov> wrote:
>
> > Mike – Dave Halpern suggested that we consider what the NASA response should be (assuming there should be!). - Jack

------ Forwarded Message
From: "Brown, Dwayne C. (HQ-NB060)" <dwayne.c.brown@nasa.gov>
Date: Wed, 29 Aug 2007 12:18:48 -0400
To: <smd@hq.nasa.gov>
Conversation: Science in the News: August 29
Subject: Science in the News: August 29

WSJournal Says NASA's "Blunder" Evidence Of Global Warming Hype. The Wall Street Journal <http://online.wsj.com/article/SB118835472067611877.html.html> (8/29, A14, 2.06M) editorializes, "The latest twist in the global warming saga is the revision in data at NASA's Goddard Institute for Space Studies, indicating that the warmest year on record for the U.S. was not 1998, but rather 1934 (by 0.02 of a degree Celsius)." The Journal adds, "If nothing else, the snafu calls into question how much faith to put in climate change models. In the 1990s, virtually all climate models predicted warming from 2000-2010, but the new data confirm that so far there has been no warming trend in this decade for the U.S. Whoops. ... NASA's blunder only became a news story after Internet bloggers played whistleblower by circulating the new data across the Web. So far this year NASA has issued at least five press releases that could be described as alarming on the pace of climate change. But the correction of its overestimate of global warming was merely posted on the agency's Web site. James Hansen, NASA's ubiquitous climate scientist and a man who has charged that the Bush Administration is censoring him on global warming, has been unapologetic about NASA's screw up. He claims that global warming skeptics – 'court jesters,' he calls them – are exploiting this incident to 'confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change.' So let's get this straight: Mr. Hansen's agency makes a mistake in a way that exaggerates the extent of warming, and this is all part of a conspiracy by 'skeptics'? It's a wonder there aren't more of them."

Swift Satellite Will Resume Studies Of Gamma-Ray Bursts. New Scientist <http://space.newscientist.com/article/dn12552-disoriented-space-telescope-regains-bearings-but-not-vision.html> (8/29, Shiga) reports, "NASA's Swift satellite has regained its bearings following a glitch that prevented it from taking observations," but "it will likely be several more weeks before it can resume studying cosmic explosions called gamma-ray bursts." Swift was launched in November of 2004, and is successful in that "it is able to rapidly swivel to train its instruments on the source of each fleeting burst."

Mars Rovers Set To Return To Work. Aviation Week <http://www.aviationweek.com/aw/generic/story.jsp?id=news/rovers082807.xml&headline=Mars%20Rovers%20On%20Move%20Again%20&channel=space> (8/29, Covault) reports, "The Mars rovers Spirit and Opportunity are on the move again after surviving electrical power shortages caused by global dust storms that have swept the red planet since early July." Since "weather and power conditions continue to improve, although very slowly, for both rovers," they are "back on schedule to communicate daily." UPI <http://www.upi.com/NewsTrack/Science/2007/08/28/mars_rovers_resume_some_functions/5217/> (8/29) adds that "mission controllers were taking advantage of gradual clearing of dust from the sky while also taking precautions against buildup of dust settling onto the rover." It is noted that "both rovers had become immobilized when a giant dust storm on Mars cut off their solar energy supply."

NASA Scientists Predict Wetter Tropics. The (UK) Register <http://www.theregister.co.uk/2007/08/28/tropics_wetter/> (8/29, Sherriff) reports, "NASA researchers now say they have good evidence that the tropics are getting wetter, with more rain falling over the oceans, than on land. According to a study, published in the August 1 edition of the American Meteorological Society's Journal of Climate, 2005 was the wettest year between 1979 and the present day, followed by 2004, 2003, 2002 and 1998. 'When we look at the whole planet over almost three decades, the total amount of rain falling has changed very little. But in the tropics, where nearly two-thirds of all rain falls, there has been an increase of 5 per cent,' said lead author Guojun Gu, a research scientist based at NASA's Goddard Space Flight Center. The researchers used data from satellites and ground based observation stations to create their global record. Although the record of land based rainfall goes back many years, it is only in the last 30 years that satellite monitoring has allowed researchers to track the amount of rain falling over the seas."

NOAA Study: Human Activity Biggest Factor In 2006 High Temps. AP <http://news.yahoo.com/s/ap/20070828/ap_on_sc/greenhouse_warming;_ylt=Ar_of8dp1FgHKIx.s.g710ms0NUE> (8/28, Schmid) reports, "Warming caused by human activity was the biggest factor in the high temperatures recorded in

2006, according to a report by researchers at the National Oceanic and Atmospheric Administration. The analysis, released Tuesday, is being published in the September issue of Geophysical Research Letters, published by the American Geophysical Union."

Scholar Suggests Scorching Summers Will Be Common. The AP <http://www.usatoday.com/weather/climate/globalwarming/2007-08-28-montana-summers_N.htm?csp=34> (8/29) reports, "If global warming continues as expected, the blistering heat of this past July will be commonplace in less than 50 years, a University of Montana climate expert predicts. Steve Running, a forestry professor and one of the authors of an international paper on climate change released this spring, said forecasts predict an average July in 2050 will be like the parching, record-breaking July of 2007, with triple-digit temperatures common."

------ End of Forwarded Message

--

****
Michael H. Freilich
Director
Earth Science Division
Science Mission Directorate
NASA HQ, Mail Suite 3F71
300 E St. SW
Washington, DC 20546

Phone: 202-358-7226
FAX: 202-358-2770
Email: mhf@nasa.gov
****

Subject: Re: [Fwd: GISTEMP data reproduction request]
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 4 Sep 2007 12:29:53 -0400
To: rruedy@giss.nasa.gov
CC: makis@giss.nasa.gov, klo@giss.nasa.gov, rschmunk@giss.nasa.gov, gavin@giss.nasa.gov

Let's talk about this early this afternoon. I beleive that we also got a request from McIntyre late last week? Jim

On 9/4/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Hi Jim,
>
> This refers to a web site belonging to a person in England - at first sight, his analyses of GHCN data seem strangely naive, some inspired by McIntyre's blogs.
>
> Anything we should do about this inquiry ?
>
> Reto
>
> ------- Forwarded Message -------
> From: Michael Cassin <michael@cassin.name>
> To: Reto Ruedy <rruedy@giss.nasa.gov>
> Subject: GISTEMP data reproduction request
> Date: Tue, 4 Sep 2007 15:11:31 +0100
>
> Hello Dr Ruedy,
>
> My name is Michael Cassin. I'm developing some technology for hosting online datasets and statistical analysis, and would like to inquire about the possibility of reproducing the GISS temperature data. I realise it is available through the web interface, but would like to know if there is an ftp, or other, site where the entire dataset can be downloaded. I'd also like to be sure of any copyright issues.
>
> Apologies for the direct intrusion into your inbox. I would understand if you redirect my inquiry.
>
> Best regards,
>
> Mike Cassin
> Managing Director
> Stikir Ltd
>
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Fwd: source code
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 4 Sep 2007 18:48:08 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Reto,
Here is another request. There are many charges out there that we are hiding the computer code and refuse to give it up. It would be very foolish not to provide what we have now. Below is the response that I would like to give -- is it o.k. -- please improve or suggest any changes that you think it should have.
Jim

You are welcome to have a copy of our computer code. You are not the only one who has asked for it. Depending upon your programming background, there is a possible small complication in that parts of the computer program as it is used were written by a person (Jay Glascoe) who left several years ago in a code (Java????) that is obscure to most of us (perhaps all of us at GISS). Reto Ruedy is in the process of rewriting that part in Fortran, as we know the function of it; and the Java and Fortran codes should give the same results. In the interim, we will release the codes as they have been used (including Jay's Java subroutines). The procedure to access will be described in my next e-mail, which I will send this week.
Jim Hansen

-------- Forwarded message --------
From: .berkeley.edu >
Date: Sep 4, 2007 6:29 PM
Subject: source code
To: jhansen@giss.nasa.gov

Dear Dr. Hansen,

My name is and I am a graduate student in physics at UC Berkeley. I am writing to request the complete computer program source code you and your coauthors used to adjust and analyze the surface temperature data in the following paper:

Hansen, J., Mki. Sato, R. Ruedy, K. Lo, D.W. Lea, and M. Medina-Elizade 2006. Global temperature change. Proc. Natl. Acad. Sci. 103, 14288-14293,
http://www.pnas.org/cgi/content/abstract/103/39/14288

I and others would like to understand all details of your analysis of global temperature trends. I am making this request for source code consistent with the PNAS policy copied below.

Thank you very much in advance.

Sincerely,

PNAS policy from http://www.pnas.org/misc/iforc.shtml#policies

(viii) Materials and Data Availability. To allow others to replicate and build on work published in PNAS, authors must make materials, data, and associated protocols available to readers. Authors must disclose upon submission of the manuscript any restrictions on the availability of materials or information.

Authors must make Unique Materials (e.g., cloned DNAs; antibodies; bacterial, animal, or plant cells; viruses; and computer programs) promptly available on request by qualified researchers for their own use. Failure to comply will preclude future publication in the journal. It is reasonable for authors to charge a modest amount to cover the cost of preparing and shipping the requested material. Contact pnas@nas.edu if you have difficulty obtaining materials.

Subject: source code
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 4 Sep 2007 18:51:19 -0400
To: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Robert, Here is a more relevant discussion. Forgot to copy you. Jim

--------- Forwarded message ---------
From: **James Hansen** < jhansen@giss.nasa.gov>
Date: Sep 4, 2007 6:48 PM
Subject: Fwd: source code
To: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato < makis@giss.nasa.gov>

Reto,
Here is another request. There are many charges out there that we are hiding the computer code and refuse to give it up. It would be very foolish not to provide what we have now. Below is the response that I would like to give -- is it o.k. -- please improve or suggest any changes that you think it should have.
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Jim Hansen

--------- Forwarded message ---------
From: .berkeley.edu >
Date: Sep 4, 2007 6:29 PM
Subject: source code
To: jhansen@giss.nasa.gov

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berkeley.edu

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Subject: Re: source code
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 4 Sep 2007 22:06:21 -0400
To: " .berkeley.edu>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

You are welcome to have a copy of our computer code. Depending upon your programming background, there is a possible small complication in that parts of the computer program as it is used were written by a person (Jay Glascoe) who left several years ago in a code (Python) that is obscure to most of us (perhaps all of us at GISS). Reto Ruedy is in the process of rewriting that part in Fortran, as we know the function of it; and the Python and Fortran codes should give the same results. In the interim, we will release the codes as they have been used (including Jay's Python subroutines). The procedure to access the codes will be described in my next e-mail, which I will send this week.

Jim Hansen

(By the way, Reto also notes that the codes are a collection that accumulated over 25 years. Actually, I started with an NYU undergraduate student in the 1970s, but Sergej Lededeff replaced most of that code in the early 1980s. Reto says that he intends to simplify/combine steps in the code, but it may be several weeks before he can do that.)

On 9/4/07, berkeley.edu> wrote:

> Dear Dr. Hansen,
>
> My name is . and I am a graduate student in physics at UC Berkeley. I am writing to request the complete computer program source code you and your coauthors used to adjust and analyze the surface temperature data in the following paper:
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Subject: Re: source code
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 5 Sep 2007 08:36:18 -0400
To: "[redacted]@gmail.com>
CC: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

--- which shows that you are from a different era --- Jay always laughed at us as antiquarians dealing in relics --- Jim

On 9/5/07, [redacted]@gmail.com> wrote:

> Dear Dr. Hansen,
>
> Thank you very much for your quick reply. I look forward to seeing the code.
>
> As it happens, I frequently use Python (in particular, the SciPy and Numeric Python packages) in my own data analysis projects. I think it is one of the best available programming environments for data processing, and I would heartily recommend it. Much of it is very similar to Matlab, which you may be more familiar with.
>
> Best regards,
>
> On 9/4/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> >
> >
> > You are welcome to have a copy of our computer code. Depending upon your
> > programming background, there is a possible small complication in that parts
> > of the computer program as it is used were written by a person (Jay Glascoe)
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> > procedure to access the codes will be described in my next e-mail, which I
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> >
> > Jim Hansen
> >
> > (By the way, Reto also notes that the codes are a collection that
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> > student in the 1970s, but Sergej Lededeff replaced most of that code in the
> > early 1980s. Reto says that he intends to simplify/combine steps in the
> > code, but it may be several weeks before he can do that.)
> >
> >
> > On 9/4/07, [redacted].berkeley.edu> wrote:
> > > Dear Dr. Hansen,
> > >

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> > source code you and your coauthors used to adjust and analyze the
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> > Medina-Elizade 2006. Global temperature change. Proc. Natl. Acad. Sci.
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> > http://www.pnas.org/cgi/content/abstract/103/39/14288
> >
> > I and others would like to understand all details of your analysis of
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> > Thank you very much in advance.
> >
> > Sincerely,
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> > berkeley.edu
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> >
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> http://www.pnas.org/misc/iforc.shtml#policies
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> > use. Failure to comply will preclude future publication in the
> > journal. It is reasonable for authors to charge a modest amount to
> > cover the cost of preparing and shipping the requested material.
> > Contact pnas@nas.edu if you have difficulty obtaining materials.
> >
> >
>
>

Subject: Re: DATA correction to surface temperatures
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 5 Sep 2007 20:30:09 -0400
To: kesten <canalzero2004@yahoo.com.mx>
CC: James.E.Hansen@nasa.gov

Kesten,

Mc is conducting a pr campaign. There was a minor oversight in in the data processing, due the same stations being in WMO and NOAA data streams but our processing program not recognizing that NOAA had done some adjustments to U.S. stations based on "metadata", while the WMO data was unadjusted. So when the series were hooked together (the NOAA data only going up to 2000) there was a discontinuity which averaged 0.15C over the U.S. and 0.003C. The impact on global temperature was entirely negligible. Contrary to the misinformation that was encouraged in the rightwing media (I cannot understand why conservatives are not the ones standing up for preserving creation -- really wierd -- I guess it has something to do with $$), it did not even change the rankings of top temperatures in the U.S. We have always had 1934 and 1998 as a statistical tie. In the only paper (2001) in which we looked at U.S. temperatures we had 1934 warmer by an insignificant one or two hundredths of a degree and we still have that. The method is described very clearly in the literature, but in order to avoid any appearance of holding anything back we are releasing the computer codes (this week, I hope, it is first priority for Reto). You can find the 1987, 1999, 2001 papers describing the method (very simple) on www.giss.nasa.gov -- look under publications and my name. I have to run now but will forward you something later.

Jim Hansen

On 9/5/07, **kesten** <canalzero2004@yahoo.com.mx> wrote:

> Hi Dr. Hansen,
>
> I'm a journalist with CFBX news in Kamloops BC, working on a piece about global warming science and the journalism surrounding it.
>
> I heard about the correction to NASA data suggested by Steve McIntyre from an interview with yourself on CBC radio. You ended by suggesting that the change was insignificant to the body of climate change evidence, and yet, the re-ordering of US temperature record years seemed fairly significant to my ears. Afterwards I read an article suggesting that it doesn't affect the global trends.
>
> Reports (and McIntyre) suggest that McIntyre has to reverse-engineer the data crunching methods of the Goddard Institute. I'm curious as to why this should be necessary. Is the methodolgy not published or given in sufficient detail for others to check the data? Did you receive requests from McIntyre for data or methods?
>
> I visited the GISS website: http://data.giss.nasa.gov/gistemp/ and was surprised to find no mention of the data correction nor McIntyre. The issue received quite a bit of media attention up here.
>
> McIntyre and right wing institutes like the Fraser Institute have also made critisicms about IPCC's peer review process. The lack of publication of reviewer's comments. Significant re-writing by beurocrats. Is there anywhere the process is described in more detail than the introduction to the IPCC summary,

any source for such reviewer's comments?

I'm trying to establish to what extent the scientific community is in agreement on the issue. I would expect a certain healthy level of dissent among the 2000 contributors and the authors and reviewers. Where does one find the dissenting opinion from within the IPCC process?

I have a bachelors in math and physics, so feel free to reference any primary published material and statistical methodologies.

thanks for your time,

kesten

Subject: Program release
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 6 Sep 2007 10:28:40 -0500
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>

Reto, Robert,

We are getting more and more questions as to why we will not release our temperature data analysis programs. We need to make these available this week, by the end of the day tomorrow.

Can you put these in a place where they are accessible, with an address that I will put in an e-mail? This will be as part of an e-mail that also provides access to the revised "Peak Oil" paper.

It probably should include a simple listing of the function of each subroutine. We can note that a simplified version of the programs will be available in the future.

Finally we need:
(1) a list of the stations that we remove, and
(2) line graph of global mean land-ocean temperature index with and without these stations removed (the draft that you gave me has No Corrections, Current Web, No Cleaning -- what do these three categories mean? I believe what we want is two curves, one that uses the data without alterations and one for what we present to the public
(3) maps showing the results with and without our changes -- the four maps that you made for 1880-2006 are fine, but the maps need to be made with Makiko's program/color scale etc. Also I would like to add two maps: delete the two maps on the left (which show the effect of St Helena/Lihue) and add the result when South America and Africa are replace with no data, the objective being to see how these continents contribute to the global mean temperature change. Clearly the data in those continents is pretty lousy, but how much difference does that make for the global mean?

Jim

Subject: Re: Program release
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 06 Sep 2007 12:56:47 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Darnell Cain <dcain@giss.nasa.gov>, klo@giss.nasa.gov

Jim,

I understand the need to make the programs and input files available. But to put out an unusable product (though it works on our machines, based on the directory structures, compilers, etc. of the various machines) that has to be repeatedly changed may be counterproductive. I wish I had another week - or at least a weekend where I could work without interruption.

(1) As far as list of stations we remove is concerned, most are removed or remain unused automatically because their records are too short to have sufficient overlap with the dominating stations. Do you only want a list of those stations that are explicitly removed at the beginning of the process due to their strange data ?

(2) Corrections: We correct 2 stations (St.Helena and Lihue) and use USHCN instead of the corresponding GHCN data. The rest is dropping parts or all of a record (=cleaning). Hence:

"no corrections"="not correcting the 2 stations, not using USHCN, no cleaning",

"current"="2 corrections+USHCN+cleaning",

"no cleaning"="2 corrections+USHCN".

Are any 2 of these 3 options what you need ?

I guess (3) can be done by Makiko, if not let me know.

Reto

On Thu, 2007-09-06 at 10:28 -0500, James Hansen wrote:

> Reto, Robert,
>
> We are getting more and more questions as to why we will not release our temperature data analysis programs. We need to make these available this week, by the end of the day tomorrow.
>
> Can you put these in a place where they are accessible, with an address that I will put in an e-mail? This will be as part of an e-mail that also provides access to the revised "Peak Oil" paper.
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> It probably should include a simple listing of the function of each subroutine. We can note that a simplified version of the programs will be available in the future.
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Jim

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Program release
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 6 Sep 2007 13:41:00 -0500
To: rruedy@giss.nasa.gov
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Yes, the perception is, unfortunately, what counts now. We will have to release them with the very strong recommendation that anyone wishing to actually use them should wait until they are cleaned up, with the estimate that this will take another week or so (is that the appropriate estimate to give?).

Yes, the list should be those stations explicitly removed, since that is perhaps the most subjective thing that we do to the data, other than the procedures for analysis that are described in the papers.

The "current" result is one of the results that we want to illustrate. For the other, I was thinking of excluding the correction of two stations and not dropping the stations that are on the list of removed stations (some of them might get removed by the analysis program, but that is o.k., it is using objective criteria). If you do not have this, but have something that includes it, for example also replacing USHCN of "current" with WMO, that should be all right.

The objective is too show that our partially subjective choice of stations to remove does not significantly alter the global warming that we obtain. A second objective is to show that the admittedly large problems with African and South American data does not significantly alter the inferred global warming (this second objective just requires Makiko to omit those areas).

Jim

On 9/6/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> I understand the need to make the programs and input files available.
> But to put out an unusable product (though it works on our machines,
> based on the directory structures, compilers, etc. of the various
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> or remain unused automatically because their records are too short to
> have sufficient overlap with the dominating stations. Do you only want a
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> the process due to their strange data ?
>
> (2) Corrections: We correct 2 stations (St.Helena and Lihue) and use
> USHCN instead of the corresponding GHCN data. The rest is dropping parts
> or all of a record (=cleaning). Hence:
>
> "no corrections"="not correcting the 2 stations, not using USHCN, no

Subject: Re: Program release
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 6 Sep 2007 15:19:51 -0500
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: rruedy@giss.nasa.gov, "Makiko Sato" <makis@giss.nasa.gov>, "Ken Lo" <klo@giss.nasa.gov>

Reto's write-up is excellent. I only want to re-write the introductory couple of paragraphs. How should I do that? This is not a format that I have worked in -- can/should I copy and put in Word?? Jim

On 9/6/07, **Robert B. Schmunk** <Robert.B.Schmunk@nasa.gov> wrote:

> On Sep 6, 2007, at 15:44, Reto Ruedy wrote:
>
> > Jay's
> > programs are in step 1 and Robert is working on it (he has trouble
> > compiling one of the C programs; also the order in which stations are
> > combined seems dependent on the release of the data base system)
>
> The C programs mentioned are actually compiled C "extensions"
> which are used by the Python programs. I was able to install
> a copy of these extensions on Web2 in the spring two years ago
> when we managed to transfer the various GISTEMP CGI scripts
> from Web1 to Web2, but unfortunately I do not have any record
> of what special hoops I had to jump through in order to do so.
>
> As for the database system, the Python programs save the
> station data in binary files using Berkeley DB. The version
> of BDB on the machine Jay and on the machine Web2 is different.
>
> I have been able to get a Python script which combines station
> data records to run on Web2, but there are some differences in
> the resulting output files when compared with the files
> generated on Jay. I am currently trying to figure out what
> might be the cause of that, and whether it might be a result of
> the difference in BDB versions.
>
> rbs
>
> --
> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
> 10025

Subject: Re: Program release
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 7 Sep 2007 13:49:06 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, "Ken Lo" <klo@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

Makiko,

Please work on making nice looking maps with global temperature trends for the periods 1880-recent and 1900-recent, for the three cases "current", ""no cleaning"", and "South America and Africa blank". By ""no cleaning"", what I was hoping for was the same as "current" but with the stations on our "no call" list excluded, which means exclude St Helena, the Hawaii station, and the others that our cleaning catchs. I am not sure if we have exactly that result.

Jim

On 9/7/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Robert,
>
> I combined all source codes according to the steps I outlined in my documentation and put it on jay:/gcm/GHCN/GISTEMP_sources . Please take a look at it - I tested most pieces. Maybe you find a better way to organize the thing.
>
> The documentation "gistemp.txt" is not the final version. The whole thing is only about 5 MB.
>
> Reto
>
> On Thu, 2007-09-06 at 22:16 -0400, Robert B. Schmunk wrote:
> > Reto,
> >
> > Earlier I noted:
> >
> > > I have been able to get a Python script which combines station
> > > data records to run on Web2, but there are some differences in
> > > the resulting output files when compared with the files
> > > generated on Jay. I am currently trying to figure out what
> > > might be the cause of that, and whether it might be a result of
> > > the difference in BDB versions.
> >
> > It turns out that the difference is in the version of Python
> > installed on the computer. More specifically, it's the Python
> > hashing function.
> >
> > There are a couple places in comb_records.py where the
> > records.items() command is used to get the separate records

Subject: draft e-mail
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 7 Sep 2007 17:50:37 -0400
To: "makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

here is draft e-mail. I am still writing the 'history' introduction to the program listing.

"Peak Oil" Paper Revised and Temperature Analysis Code

To be removed from Jim Hansen's e-mail distribution respond with REMOVE in subject line.

(1) The paper "Implications of 'Peak Oil' for Atmospheric CO_2 and Climate", recently revised and resubmitted to *Environmental Research Letters*, is available at XXXXXXXXXXX.

A principal concern of both referees was our use of a pulse-response function, fit to the Bern carbon cycle model, as opposed to a detailed carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the simplicity and transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO_2 levels, in which case the strong positive feedbacks found in some climate-carbon models are less likely, and in any case such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.

We have minimized reference to a "dangerous" atmospheric CO_2 level to satisfy one of the referees. We retained one reference to our recent papers, which are published in peer-reviewed journals and, we believe, make a strong case that we are already close to a dangerous CO_2 level.

The principal conclusion of this paper is that it is possible to keep atmospheric CO_2 at a much lower limit than commonly assumed, provided that coal use is phased out except where the CO_2 is captured and stored. This paper provides some of the rationale for the discussion in "Old King Coal II".

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document as well as practical on a short time scale the programs that produce our global temperature analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer unique functions Reto would have preferred to have a week or two to combine these into a simpler more transparent structure, but because of a recent flood of demands for the programs, they are being made available as is. People interested in science may want to wait a week or two for a simplified version.

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the choice of which stations are eliminated from the record. This is based on identifying the (small fraction of) stations that raise a red flag (e.g., deviation of 5 standard deviations are more, or a large temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest stations;

if these displayed similar features the records were retained. We provide here the list of stations eliminated.

Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global temperature with and without these stations, and Figure 2 shows the global mean temperature with and without these stations. The effect is practically imperceptible and clearly insignificant.

Another favorite target of those who would raise doubt about the reality of global warming is the lack of quality data from South America and Africa, a legitimate concern. You will note in our maps of temperature change some blotches in South America and Africa, which are probably due to bad data. Our procedure does not throw out data because it looks unrealistic, as that would be subjective. But what is the global significance of these regions of exceptionally poor data? As shown by Figure 1, omission of South America and Africa has only a tiny effect on the global temperature change. Indeed, where it makes a difference it increases the temperature change by (an entirely insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the "history" introduction to the program description.

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Subject: Re: draft e-mail
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 7 Sep 2007 18:42:08 -0400
To: rruedy@giss.nasa.gov
CC: "makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Here is a not quite complete draft. Jim

On 9/7/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

Jim,

Just a couple of typos in the "Temperature Analysis Code" section:

2nd paragraph: replace "5 standard deviations are more" by ".. or more"
and in the beginning of the next sentence "I compared the" by "The".

Reto

On Fri, 2007-09-07 at 17:50 -0400, James Hansen wrote:
> here is draft e-mail. I am still writing the 'history' introduction to
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>
> "Peak Oil" Paper Revised and Temperature Analysis Code
>
>
>
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>
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The principal conclusion of this paper is that it is possible to keep atmospheric CO_2 at a much lower limit than commonly assumed, provided that coal use is phased out except where the CO_2 is captured and stored, and use of unconventional fossil fuels is also accompanied by CO_2 capture and storage. This paper provides some of the rationale for the discussion in "Old King Coal II".

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[Why not wait a week before sending this out? Lack of instant response to a request, even lack of a response in negative time, seems to be sufficient reason for international announcements. Steve McClintock stated on a radio program on September XX that GISS refused to give him our computer program. We have a series of e-mails between him and Reto showing that the request came the following day. The objectives here do not seem to be science.]

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the

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Hansen and Lebedeff (Global trends of measured surface air temperature, *J. Geophys. Res.* **92**, 13345, 1987) documented the analysis method, showing that the correlation of temperature change was reasonably strong for stations separated by up to 1200 km, especially at middle and high latitudes. They obtained quantitative estimates of the error in annual and 5-year mean temperature change by sampling at station locations a spatially complete data set of a long run of a global climate model, which was shown to have realistic spatial and temporal variability.

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[As you will see in the latter paper we found 1934 and 1998 to be in a statistical tie for warmest U.S. year, 1934 being warmer by an insignificant couple hundredths of a degree. We still find that result. The minor flaw recently found in our data analysis, which affected U.S. temperatures by 0.15C after 2000, did not alter this result. Pundits picking up on this non-story did not get this right, and further they tried to leave the impression that they were talking about global temperature. Ah me.]

You may wonder why we bother to put up with this hassle and the nasty e-mails that it brings. Well, there are at least a couple of good reasons.

First, there is scientific value in having near-real-time global temperature analyses, it is fairly easy to run the analyses as new data comes in each month, and a lot of people tell us that our analysis and presentation is useful to them. There is merit in having more than one group do the analyses because the results differ somewhat. For example, in 2005 we were the only group initially reporting that as being, on global mean, the warmest year in the record. We would not have obtained that result with our method of extrapolating estimates of anomalies out to distances of 1200 km from the nearest station. Later checks with satellite infrared data indicated that our Arctic and Greenland anomalies were, if anything, conservative.

Subject: Re: draft e-mail
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 7 Sep 2007 18:57:30 -0400
To: rruedy@giss.nasa.gov
CC: "makiko Sato" <makis@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

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NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

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PeakOilRevised.070907.doc	Content-Type: application/msword Content-Encoding: base64

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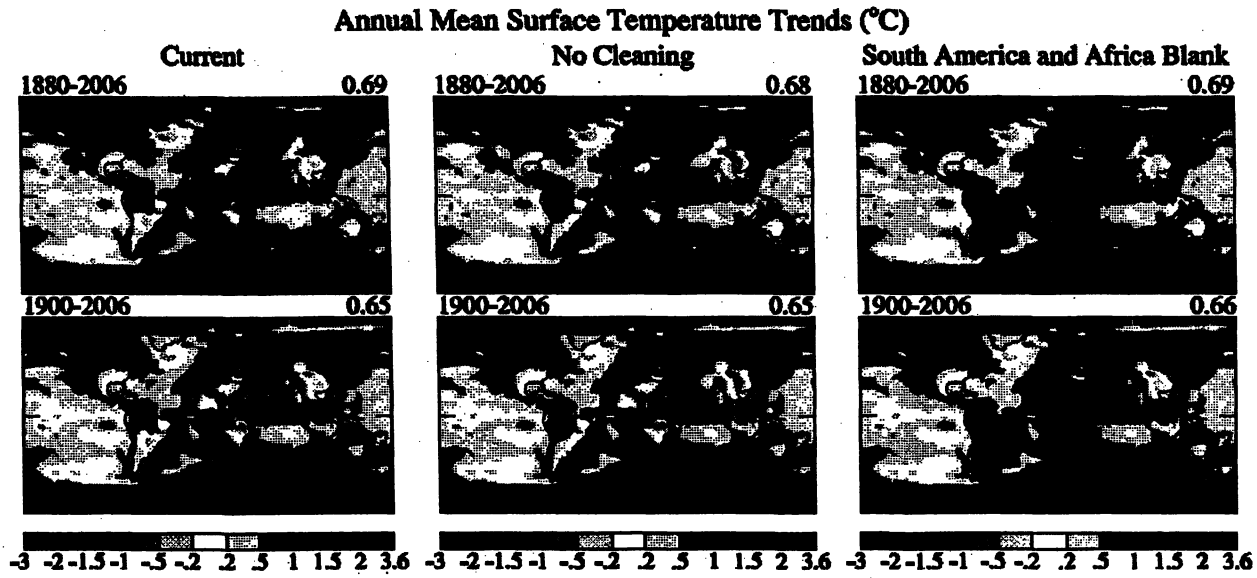

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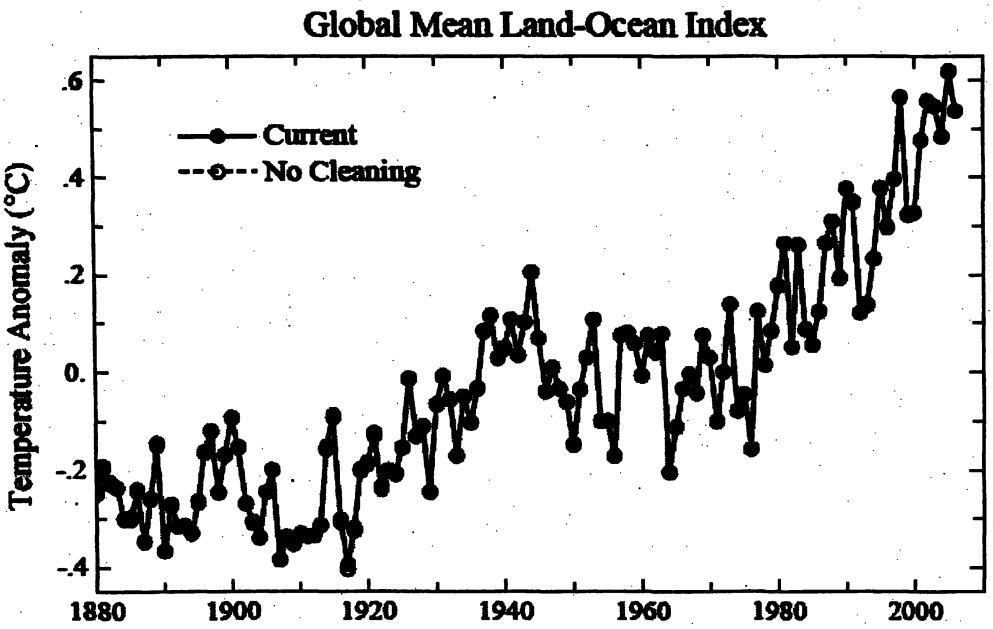

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> > > http://pubs.giss.nasa.gov/abstracts/submitted/Kharecha_Hansen.html
> > >
> > > In the second para about GISTEMP, should "McClintock" be "McIntyre"?
> > > Note there is also a XX in this para that still needs to be filled
> > > in.
> > >
> > > rbs
> > >
> > > On Sep 7, 2007, at 18:57, James Hansen wrote:
> > >
> > > > Here is a complete draft. The part for History is between ********s

On 9/7/07, James Hansen <jhansen@giss.nasa.gov> wrote:

Here is a not quite complete draft. Jim

On 9/7/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

Jim,

Just a couple of typos in the "Temperature Analysis Code" section:

2nd paragraph: replace "5 standard deviations are more" by ".. or more"
and in the beginning of the next sentence "I compared the" by "The".

Reto

On Fri, 2007-09-07 at 17:50 -0400, James Hansen wrote:

here is draft e-mail. I am still writing the 'history' introduction to

the program listing.

"Peak Oil" Paper Revised and Temperature Analysis Code

To be removed from Jim Hansen's e-mail distribution respond with REMOVE in subject line.

(1) The paper "Implications of 'Peak Oil' for Atmospheric CO2 and Climate", recently revised and resubmitted to Environmental Research
Letters, is available at XXXXXXXXXXX.

A principal concern of both referees was our use of a pulse-response
function, fit to the Bern carbon cycle model, as opposed to a detailed
carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the

simplicity and
transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO2 levels, in which case the strong positive feedbacks
found in some climate-carbon models are less likely, and in any case
such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.

We have minimized reference to a "dangerous" atmospheric CO2 level to
satisfy one of the referees. We retained one reference to our recent
papers, which are published in peer-reviewed journals and, we believe,
make a strong case that we are already close to a dangerous CO2 level.

The principal conclusion of this paper is that it is possible to keep
atmospheric CO2 at a much lower limit than commonly assumed, provided
that coal use is phased out except where the CO 2 is captured and stored. This paper provides some of the rationale for the discussion
in "Old King Coal II".

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document as well as practical
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analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over
the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer

unique functions Reto would have preferred to have a week or two to combine these into a simpler more transparent structure, but because of a recent flood of demands for the programs, they are being made available as is. People interested in science may want to wait a week or two for a simplified version.

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the choice of which stations are eliminated from the record. This is based on identifying the (small fraction of) stations that raise a red flag (e.g., deviation of 5 standard deviations are more, or a large temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest stations; if these displayed similar features the records were retained. We provide here the list of stations eliminated.

Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global temperature with and without these stations, and Figure 2 shows the global mean temperature with and without these stations. The effect is practically imperceptible and clearly insignificant.

Another favorite target of those who would raise doubt about the reality of global warming is the lack of quality data from South America and Africa, a legitimate concern. You will note in our maps of temperature change some blotches in South America and Africa, which

are probably due to bad data. Our procedure does not throw out data
because it looks unrealistic, as that would be subjective. But what
is the global significance of these regions of exceptionally poor data? As shown by Figure 1, omission of South America and Africa has
only a tiny effect on the global temperature change. Indeed, where it
makes a difference it increases the temperature change by (an entirely
insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in
case you wonder why we subject ourselves to the shenanigans, there are
scientific reasons, repeated here from the "history" introduction to
the program description.

<PeakOilRevised.7Sept2007.doc>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

PeakOilRevised.070907.doc	**Content-Type:** application/msword **Content-Encoding:** base64

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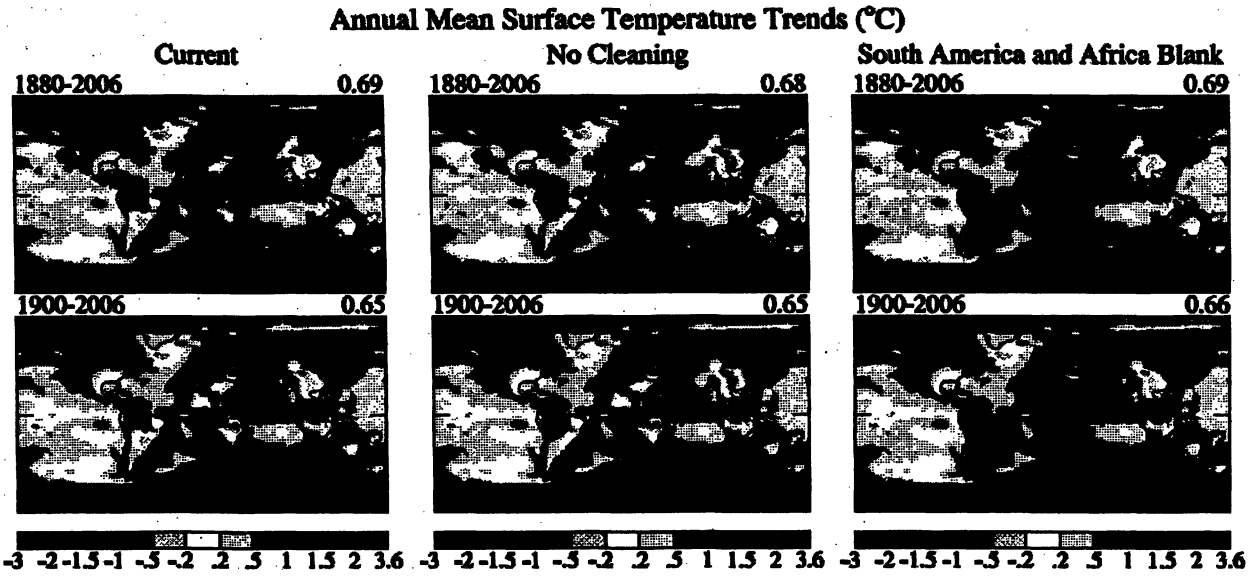

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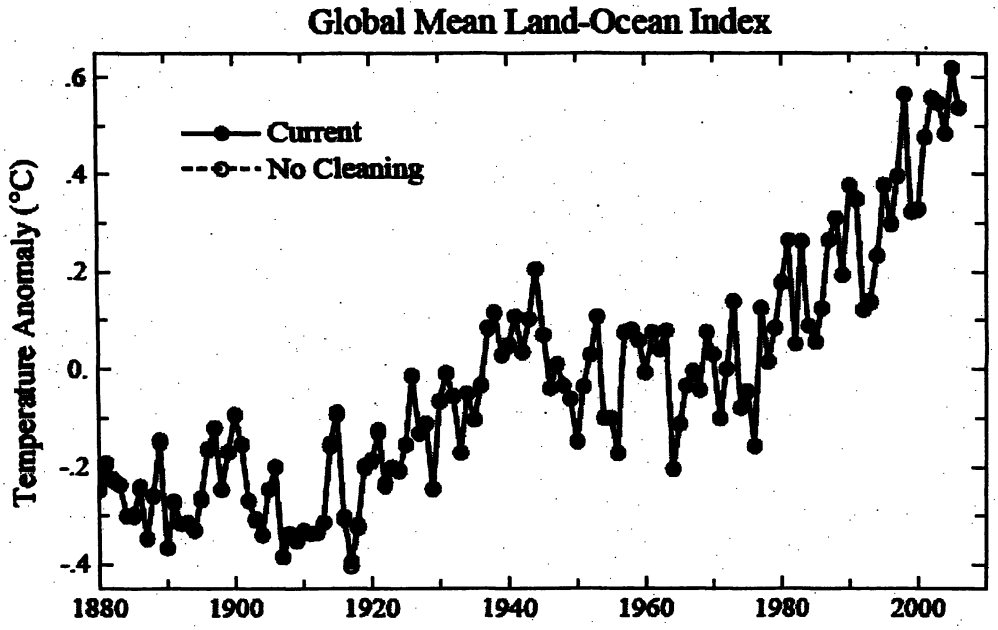

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temperature change. Indeed, the difference that omitting these areas makes is to increase the global temperature change by (an entirely insignificant) 0.01C.

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GISS Temperature Analysis

History

The basic GISS temperature analysis scheme was defined in the late 1970s by Jim Hansen when a method of estimating global temperature change was needed for comparison with one-dimensional global climate models. Prior temperature analyses, most notably those of Murray Mitchell, covered only 20-90N latitudes. Our rationale was that the number of Southern Hemisphere stations was sufficient for a meaningful estimate of global temperature change, because temperature anomalies and trends are highly correlated over substantial geographical distances. Our first published results (Hansen et al., Climate impact of increasing atmospheric carbon dioxide, *Science* **213**, 957, 1981) showed that, contrary to impressions from northern latitudes, global cooling after 1940 was small, and there was net global warming of about 0.4C between the 1880s and 1970s.

Hansen and Lebedeff (Global trends of measured surface air temperature, *J. Geophys. Res.* **92**, 13345, 1987) documented the analysis method, showing that the correlation of temperature change was reasonably strong for stations separated by up to 1200 km, especially at middle and high latitudes. They obtained quantitative estimates of the error in annual and 5-year mean temperature change by sampling at station locations a spatially complete data set of a long run of a global climate model, which was shown to have realistic spatial and temporal variability.

This derived error bar only addressed the error due to incomplete spatial coverage of measurements. As there are other potential sources of error, such as urban warming near meteorological stations, etc., many other methods have been used to verify the approximate magnitude of inferred global warming. These methods include inference of surface temperature change from vertical temperature profiles in the ground (bore holes) at many sites around the world, rate of glacier retreat at many locations, and studies by several groups of the effect of urban and other local human influences on the global temperature record. All of these yield consistent estimates of the approximate magnitude of global warming, which has now increased to about twice the magnitude that we reported in 1981. Still further affirmation of the reality of the warming is its spatial distribution, which shows largest values at locations remote from any local human influence, with a global pattern consistent with that expected for response to global climate forcings (larger in the Northern Hemisphere than the Southern Hemisphere, larger at high latitudes than low latitudes, larger over land than over ocean).

Some improvements in our analysis were made several years ago (*J. Geophys. Res.* **104**, 30997, 1999; **106**, 23947, 2001) including use of satellite-observed night lights to determine which stations in the United States are located in urban and peri-urban areas, the long-term trends of those stations being adjusted to agree with long-term trends of nearby rural stations.

****

[As you will see in the latter paper we found 1934 and 1998 to be in a statistical tie for warmest U.S. year, 1934 being warmer by an insignificant couple hundredths of a degree. We still find that result. The minor flaw recently found in our data analysis, which affected U.S. temperatures by 0.15C after 2000, did not alter this result. Pundits picking up on this non-story did not get this right, and further they tried to leave the impression that they were talking about global temperature. Ah me.]

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Second, the climate change problem is important.

Jim

Subject: Re: Peak Oil and Global Temperature
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 8 Sep 2007 13:24:28 -0400
To: "] < @gmail.com>

I tried attaching it. Jim

On 9/8/07, < @gmail.com> wrote:

Hi Jim,
I can't open your site.

On Sep 7, 2007, at 9:20 PM, James Hansen wrote:

> To be removed from Jim Hansen's e-mail distribution respond with
> REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf
>

NEW EMAILS: @gmail.com
 @gmail.com

 @gmail.com

The current wind energy generating capacity in the U.S. could prevent the burning of 8.4 million tons of coal at the current utility fuel mix. For each megawatt of wind energy produced, 2,000 tons of carbon dioxide greenhouse gases are avoided, 10 tons of sulfur dioxide and 6 tons of nitrogen oxide.
Power generated from coal and other fossil fuels, and the extraction of these fossil fuels have had, and will continue to have, impacts on birds. For example, more than 3,000 birds were killed by collisions during one night in fall migration at a four-smokestack Florida coal-fired power plant. Hundreds of thousands of birds were killed in the Exxon Valdez oil spill and thousands of acres of habitat were damaged.

ABC's Global Climate Change Program documents the significant changes in store for many migratory bird species in this century due to fossil fuel burning. Without a significant change in electrical power conservation and/or a major shift to alternative fuels, the U.S. is projected to increase its greenhouse carbon dioxide emissions between 2001 and 2025 by 43.5 percent. Global warming is predicted to cause changes in the ranges of birds, disruption of migration timing and synchrony with food resources. Avian species and some ecosystems may

be threatened. For a state by state analyses of the effects on birds, go to ABC's web site at: http://www.abcbirds.org/climatechange/statepage.htm and access The Birdwatcher's Guide to Global Warming.
FROM: AMERICAN BIRD CONSERVANCY WIND ENERGY POLICY http://www.abcbirds.org/policy/windpolicy.htm

Content-Type: application/pdf; name="distro_peakrevandgistemp_070907[1].pdf" Content-Disposition: attachment; filename="distro_peakrevandgistemp_070907[1].pdf" X-Attachment-Id: f_f6cdxiuo
Attachment Converted: "c:\program files\qualcomm\eudora\attach\distro_peakrevandgistemp_070907[1].pdf"

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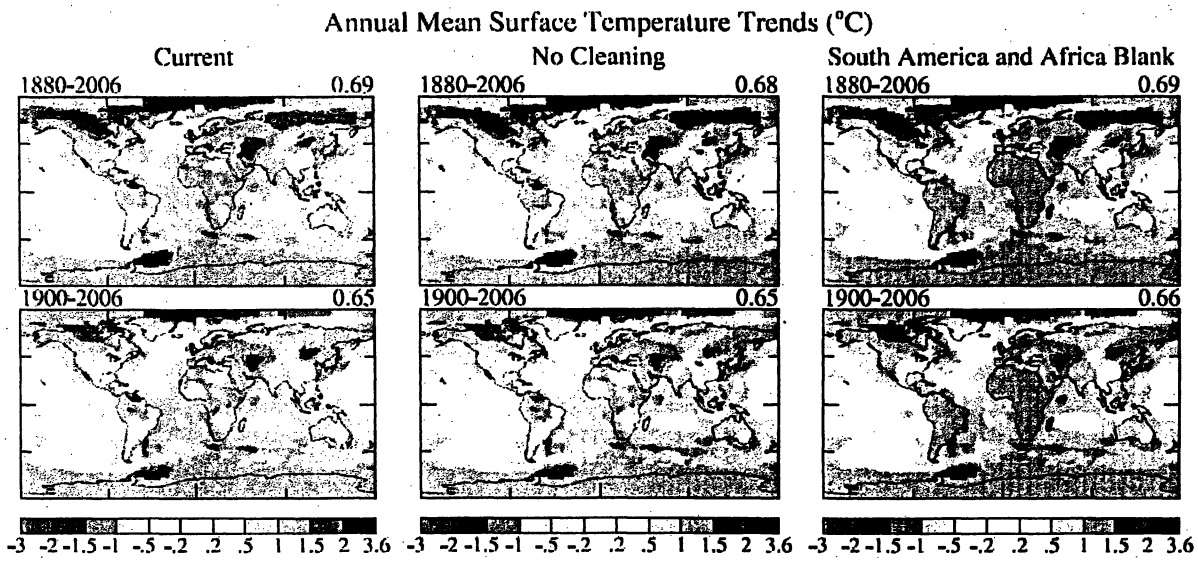

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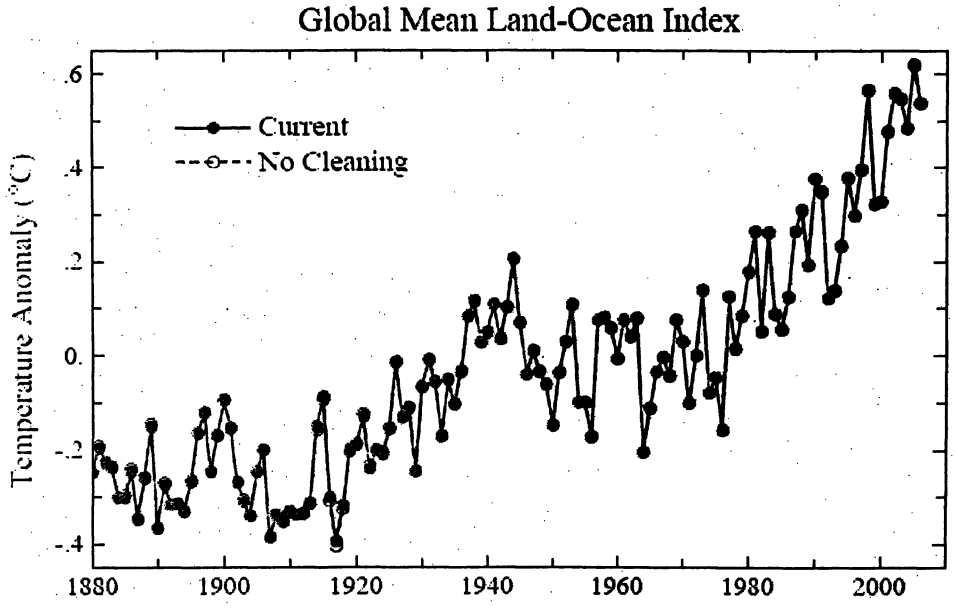

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Jim

Subject: Re: US brightness index
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 12 Sep 2007 16:02:20 -0500
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, makis@giss.nasa.gov, klo@giss.nasa.gov

We should make the explanation about switching to newer USHCN available. But I don't think that changes should be made that affect the results, even at the 0.00x level, unless/until we discuss it when I am in the office. A machine dependence is not something that we can be assaulted for, but changing the analysis in response to McIntyre adds fuel to the bonfire of his vanities. Jim

On 9/12/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> Steve is still having fun with step0, but eventually he'll find that we did not document how we determined the US brightness numbers we use in our homogeneization.
>
> Checking that step, I noticed that the program that reads Stutzer's file is machine dependent, because some stations lie on the edge between 2 cells. If in these cases I use the brighter of the 2 cells the choices become more robust. 8 of the about 400 rural stations would become peri-urban, and since we don't distinguish between urban and peri-urban stations, these would be the only effective changes.
>
> I looked at the US annual mean series in both cases: they differ by less than .003 C except between 1880 and 1900; in 1900 the difference new-old is -0.005C, in 1880 +.014C .
>
> I would prefer to use add the newer version into the sources. I'd also like to take the text out of the tar file and make it available separately - this is probably the only thing that any normal person might be interested in. The big brightness file should probably also be stored separately for the convenience of those who would just want to look at the programs.
>
> By the way, Steve's newest "discovery" about the Detroit file is simply due to our switch from USHCN-1999 to USHCN-2005.
>
> He also claims (not in any email, just in his blogs - so it may not be true), USHCN-2006 is also available; I know that NOAA has it but I can't find it on the USHCN site.
>
> Reto

Subject: Re: US brightness index
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 12 Sep 2007 16:26:41 -0500
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, makis@giss.nasa.gov, klo@giss.nasa.gov

Got Makiko's phone message. I agree that we need to add a dated statement to a list each time we change the analysis procedure or input files that are used. This can be a very brief statement. In the present case a simple statement to the effect that we switched to XXX on yyy. If WMO or NCDC changes the data in a file, that is not our change, but when we make a change it should be noted. Jim

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>
> Reto

Subject: CO2 Sequestration
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 9 Sep 2007 08:35:15 -0400
To: @sc.rr.com>

Go to IPCC report on that subject: http://www.ipcc.ch/activity/srccs/index.htm

On 9/9/07, @sc.rr.com> wrote:

> Do you have a link to some of the engineering details for sequestering CO2 from coal or oil? Thanks.
>
> -----Original Message-----
> From: James Hansen [mailto:jhansen@giss.nasa.gov]
> Sent: Friday, September 07, 2007 9:24 PM
> To: jhansen@giss.nasa.gov
> Cc: jhansen@giss.nasa.gov
> Subject: Peak Oil and Global Temperature
>
> To be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject
>
> http://www.columbia.edu/~jeh1/distro_peakrevandgistemp_070907.pdf

Subject: Re: US mean data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 13 Sep 2007 04:25:36 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

I believe that the statement that the USHCN data were updated with the 2005 data available from such-and-such website should be accompanied by line graphs of the U.S. and global temperature showing the results before and after. Jim

On 9/12/07, **Makiko Sato** <makis@giss.nasa.gov > wrote:

Reto,

Yes, now I remeber that you had told me that USHCN data were cleaned more, dropping many stations which Jim had eliminated. I was just forgetting about it when I talked with Jim on the phone just before I left work. I am sorry.

Now my question is that
when you were using USHCN through 1999 and switching to GHCN from 2000, you matched the GHCN and USHCN means for 1990-1999, right?
now when you use USHCN through 2005 and use GHCN for 2006 and 2007, do you match the GHCN and USHCN means for 1996-2005?

It is getting late, so I hope you go home soon and I will ask you tomorrow.

Good night,
Makiko

On 9/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Makiko, Jim,
>
> USHCN did a lot of cleaning since they gave us their data in 2000; in
> particular, much of the period 1880-1940 was changed or discarded for
> many stations - I mentioned that all the USHCN data we discarded were no
> longer there or were changed to look perfectly normal; also Steve's
> substantial Detroit Lakes changes were made sometime between 1999 and
> this year.
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> So it was much more than just adding the 6 extra years.
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> Reto
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> On Wed, 2007-09-12 at 21:44 -0400, Makiko Sato wrote:
> > Reto,
> >
> > I am glad that Ken Bell could fix your e-mail problem,
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> > I thought about showing both US means; USHCN through 1999 and USHCN
> > through 2005. T(1934) = 1.25 and T(1998) = 1.23 before and T(1934) =
> > T(1998) = 1.24 now. But Jim wonders (and so I do) why using USHCN
> > for 2000-2005 changes the mean temperature before 2000. After we
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> > > consistent with the rest of the data.
> > >
> > > Reto
> > >
> > > On Wed, 2007-09-12 at 19:55 -0400, Makiko Sato wrote:
> > > > Jim, Reto,
> > > >
> > > > Since Reto switched to USHCN data through 2005 this month, I was
> > > > curious how it changed. (Reto showed me some graphs, but I wanted to
> > > > see them myself.) Since I didn't get annTs_Map180x90xxx data, I went
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> > > > with the new data set, Reto? Now I see 1934 = 1.24 and 1998 = 1.24, tie!
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> > > > http://data.giss.nasa.gov/gistemp/graphs/? Or leave it as last month
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> > > > page, we extended our use of USHCN to 2005, I'd better switch to new
> > > > one, but then again these crazy people may say, now we have 1934 and
> > > > 1998 in tie. Which is true? Why did we change? etc, etc.
> > > >
> > > > Makiko
> > > >
> > > --
> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >

Subject: Re: Re: US mean data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Thu, 13 Sep 2007 14:59:31 -0500
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: rruedy@giss.nasa.gov

See suggestion below:

On 9/13/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> Jim,
>
> I made comparisons of the old data and the new data and put them at
> the top of http://www.giss.nasa.gov/~makis/GISS_Temp/ where others can't see.
>
> Reto made a good point. He says I should not use the words "USHCN
> through 1999" and "USHCN through 2005" but "USHCN 2000 version" and
> "USHCN current version". He is right because the newer version not
> just go through 2005 but also they cleaned data for 1880-1999. But
> do you think it is clear if I write "2000 version" and "current
> version"? Maybe I should add a sentence describing "2000 version" is
> through 1999 and the current version is through 2005? How do you want it?

How about:
USHCN 2000 Version (data through 1999)
USHCN Current Version (data through 2005)

> I can wait to put this on the web (for the public) tomorrow.
>
> Makiko
>
> >Date: Thu, 13 Sep 2007 12:38:59 -0400
> >To: "James Hansen" <jhansen@giss.nasa.gov>
> >From: Makiko Sato < makis@giss.nasa.gov>
> >Subject: Re: US mean data
> >Cc: rruedy@giss.nasa.gov
> >
> >Jim,
> >
> >I have US and global means for
> > (a) USHCN through 1999, with all data through July 2007
> >and
> > (b) USHCN through 2005, with all data through August 2007.
> >Can I compare these two cases? Or should I ask Reto to create
> > (c) USHCN through 1999 and with all data through August 2007,
> >if he hasn't made this yet?

>
>Comparison of (b) and (c) is totally the USHCN period change, and
>the difference between (a) and (c) are due to additions of some
>station data and NOAA modifications which may affect very little to
>the annual means through 2006.
>
>Makiko
>
>
> At 05:25 2007/09/13, James Hansen wrote:
>>I believe that the statement that the USHCN data were updated with
>>the 2005 data available from such-and-such website should be
>>accompanied by line graphs of the U.S. and global temperature
>>showing the results before and after. Jim
>>
>>On 9/12/07, Makiko Sato
>><<mailto:makis@giss.nasa.gov>makis@giss.nasa.gov > wrote:
>>Reto,
>>Yes, now I remeber that you had told me that USHCN data were cleaned
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>>>>>>>> Makiko
>>>>>>

>> > --
>> > Reto Ruedy <<mailto: rruedy@giss.nasa.gov>rruedy@giss.nasa.gov>
>> >

Subject: Re: Possible story about the temp record
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 14 Sep 2007 12:08:07 -0400
To: "David Herring" <dherring@climate.gsfc.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>, "Leslie McCarthy" <lnolan@giss.nasa.gov>
CC: "Robert Cahalan" <Robert.F.Cahalan@nasa.gov>, "Gavin Schmidt" <gschmidt@giss.nasa.gov>, "Franco Einaudi" <franco.einaudi@nasa.gov>, rruedy@giss.nasa.gov, makis@giss.nasa.gov

Hi David, September 19 I am in . September 21 would work but I have several interviews that day that do not end until mid afternoon, so you would need to stay for a late afternoon discussion. September 25 could work, in between some other discussions, on the 24th and 26th I will not be in office (at Clinton Initiative on the 26th - you could come to that, but fee is $15,000 - they waived it for me). Jim

On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov> wrote:

> Dear Jim,
>
> Bob Cahalan has asked me to travel to GISS to interview you directly so that we can produce an article for NASA's Earth Observatory about this topic, clarifying your important work in monitoring global surface temperature trends for the public.
>
> Looking at my schedule, I can take the train to New York next week on either September 19 or 21; or the following week on either September 24, 25, or 26. Would any of those days work for you? Please advise as soon as possible so I can make travel arrangements.
>
> I am looking forward to it.
>
> Best regards,
>
> David Herring
>
> At 8:45 AM -0400 8/24/07, Robert Cahalan wrote:
> >Jim,
> > Please give an estimated completion date for your writeup on
> >the temperature data adjustment, so Earth Observatory can make plans
> >to support it.
> >.Bob.
> >
> >On Aug 14, 2007, at 2:16 PM, James Hansen wrote:
> >
> >>Thanks, Bob, I am writing something -- perhaps it can be used
> >>there, or modified to be used there. Jim
> >>
> >>At 01:52 PM 8/14/2007, Robert Cahalan wrote:
> >>>Jim,
> >>> Earlier I sent the following to Gavin -- and I realize that these
> >>>are points you've been repeating for many years, just want to add

>>>that EarthObservatory could be helpful to get the word out:
>>>
>>>>Yes, I agree that this could be an educational opening for
>>>>mainstream media.
>>>>
>>>>My feeling is we need to lead with some of the faulty claims, and
>>>>then illustrate that:
>>>>(1) the data is all freely available and widely used for scientific
>>>>study;
>>>>(2) scientists use extensive statistical testing to determine
>>>>whether observed differences can be ignored as being within the
>>>>observational uncertainty or natural year-to-year variations;
>>>>(3) changes of a given magnitude at a station or in a limited area
>>>>average like the lower 48 contiguous United States, which covers
>>>>about 2% Earth's surface, are less likely to be significant than a
>>>>change of similar magnitude in averages over the full surface area
>>>>of the Earth, which is less affected by many local influences
>>>>(mention corrections to minimize urban effects too); and
>>>>(4) changes in individual years, even ones that change the ranking
>>>>of years, are less likely to be associated with sustained climate
>>>>change than changes averaged over several successive years. On
>>>>this last point we might quote the CCSP temperature synthesis and
>>>>assessment product 1.1, which emphasized this point.
>>>>
>>>>Of course these are all basic points that any of us climatologists
>>>>know, but the public needs reminding, and this brouhaha could give
>>>>a good opportunity to educate any "fence-sitters" who might be
>>>>listening...
>>>.Bob.

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

Subject: Re: NASA corrects global warming data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 14 Sep 2007 16:09:51 -0400
To: " @hotmail.com>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>

I did discuss this in some e-mails on my web site www.columbia.edu/~jeh1. A minor flaw in the way two data streams for stations within the U.S. contiguous states were concatenated caused an error of 0.15C over the U.S in 2000-2006 data, entirely negligible on global mean. It did not cause anything like what was implied by some people. Given continuing question, we will write a clarification for the GISS web site also. Jim Hansen

On 9/14/07, @hotmail.com> wrote:

> Mr. Hansen,
>
> I was hoping you could confirm if the online news articles are true that NASA's GISS corrected global warming data to show that many recent year mean temperatures were incorrect. I have found many, many articles that claim this but I've found no mention of it on an official site, such as NASA's or GISS's. I read your 2005 data pages but have not seen anything that confirms the error correction that supposedly occured about a month ago.
>
> I assume you are quite busy and probably extremely hounded on this issue, but if you could answer me as briefly as you may, it would help me on a project I am working on.
>
> Thank you very much for your time and dedication on this issue.
>
> Sincerely,
>
> ---
>
>

Subject: Fwd: numerical methodology
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 14 Sep 2007 16:13:21 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

We need to pay attention to these kind of e-mails -- they originate from Crichton/Mc attacks.

---------- Forwarded message ----------
From: [redacted]@gmail.com>
Date: Sep 13, 2007 12:48 PM
Subject: numerical methodology
To: James.E.Hansen@nasa.gov

Dear Dr Hansen,
Why do you not publish your methodology in calculating global warming?
Are you not required to do so as an employee of the government?
You are trashing the reputation of NASA.
Regards,

Subject: Fwd: NASA corrects global warming data
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Fri, 14 Sep 2007 16:41:31 -0400
To: "Reto Ruedy" <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

---------- Forwarded message ----------
From: @hotmail.com>
Date: Sep 14, 2007 4:31 PM
Subject: Re: NASA corrects global warming data
To: jhansen@giss.nasa.gov

Mr. Hansen,

Thank you very much for responding, and with such haste. The extra data in the link you provided will be very helpful. I look forward to keeping up with future updates. Best of luck in your incredible endevour.

Kindest regards,

----Original Message Follows----
From: "James Hansen" <jhansen@giss.nasa.gov>
To: " @hotmail.com>
CC: "Makiko Sato" < makis@giss.nasa.gov>, "Reto Ruedy" <cdrar@giss.nasa.gov>
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Date: Fri, 14 Sep 2007 16:09:51 -0400

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> project I am working on.
>
> Thank you very much for your time and dedication on this issue.
>
> Sincerely,
>
>
> _____
> More photos; more messages; more whatever. Windows Live Hotmail - NOW
with
> 5GB storage.
>
>
http://imagine-windowslive.com/hotmail/?locale=en-
us&ocid=TXT_TAGHM_migration_HM_mini_5G_0907
>
>
>

_____

Test your celebrity IQ. Play Red Carpet Reveal and earn great prizes!
http://club.live.com/red_carpet_reveal.aspx?icid=redcarpet_hotmailtextlink2

Subject: Temp Page
From: James Hansen <jhansen@giss.nasa.gov>
Date: Fri, 14 Sep 2007 19:49:27 -0400
To: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <rruedy@giss.nasa.gov>, Robert Schmunk <rschmunk@giss.nasa.gov>

Here is new text for the Web. Some inserts and corrections are needed. The change made in April 2006 in unintelligible. As indicated, it needs to include links to several graphs/maps made by Makiko. Some parts of this, such as the Background probably need to be via link -- but perhaps these sections should start out with the first few lines and then .... to a link for the whole section?? All of the items in the list of changes to the analysis should be included, but perhaps just the first line or so then... to a link??

Jim

TempPage.doc	**Content-Type:** application/msword **Content-Encoding:** base64

History

The basic GISS temperature analysis scheme was defined in the late 1970s by Jim Hansen when a method of estimating global temperature change was needed for comparison with one-dimensional global climate models. Prior temperature analyses, most notably those of Murray Mitchell, covered only 20-90N latitudes. Our rationale was that the number of Southern Hemisphere stations was sufficient for a meaningful estimate of global temperature change, because temperature anomalies and trends are highly correlated over substantial geographical distances. Our first published results (Hansen et al., Climate impact of increasing atmospheric carbon dioxide, *Science* **213**, 957, 1981) showed that, contrary to impressions from northern latitudes, global cooling after 1940 was small, and there was net global warming of about 0.4C between the 1880s and 1970s.

Hansen and Lebedeff (Global trends of measured surface air temperature, *J. Geophys. Res.* **92**, 13345, 1987) documented the analysis method, showing that the correlation of temperature change was reasonably strong for stations separated by up to 1200 km, especially at middle and high latitudes. They obtained quantitative estimates of the error in annual and 5-year mean temperature change by sampling at station locations a spatially complete data set of a long run of a global climate model, which was shown to have realistic spatial and temporal variability.

This derived error bar only addressed the error due to incomplete spatial coverage of measurements. As there are other potential sources of error, such as urban warming near meteorological stations, etc., many other methods have been used to verify the approximate magnitude of inferred global warming. These methods include inference of surface temperature change from vertical temperature profiles in the ground (bore holes) at many sites around the world, rate of glacier retreat at many locations, and studies by several groups of the effect of urban and other local human influences on the global temperature record. All of these yield consistent estimates of the approximate magnitude of global warming, which has now increased to about twice the magnitude that we reported in 1981. Still further affirmation of the reality of the warming is its spatial distribution, which shows largest values at locations remote from any local human influence, with a global pattern consistent with that expected for response to global climate forcings (larger in the Northern Hemisphere than the Southern Hemisphere, larger at high latitudes than low latitudes, larger over land than over ocean).

Some improvements in our analysis were made several years ago (*J. Geophys. Res.* **104**, 30997, 1999; **106**, 23947, 2001) including use of satellite-observed night lights to determine which stations in the United States are located in urban and peri-urban areas, the long-term trends of those stations being adjusted to agree with long-term trends of nearby rural stations.

Current Analysis Method

The current analysis uses surface air temperatures measurements from the following data sets: the unadjusted data of the Global Historical Climatology Network (Peterson and Vose, 1997 and 1998), United States Historical Climatology Network (USHCN) records through 2005, and SCAR (Scientific Committee on Antarctic Research) data from Antarctic stations. The basic analysis method is described by Hansen et al. (1999), with several modifications described by Hansen et al. (2001) also included. The GISS analysis is updated monthly.

We modify the GHCN/USHCN/SCAR data in two steps to obtain station data from which our tables, graphs, and maps are constructed: in step 1, if there are multiple records at a given location, these are combined into one record; in step 2 we adjust the urban stations so that their long-term trend matches that of the mean of neighboring rural stations. Urban stations without nearby rural stations are dropped.

A global temperature index, as described by Hansen et al. (1996), is obtained by combining the meteorological station measurements with sea surface temperatures based in early years on ship measurements and in recent decades on satellite measurements. Uses of this data should credit the original sources, specifically the British HadISST group (Rayner, XXXX, and others) and the NOAA satellite analysis group (Reynolds, Smith and others). (See references.)

Our analysis is limited to the period since 1880 because of poor spatial coverage of stations and decreasing data quality prior to that time. Meteorological station data provide a useful indication of temperature change in the Northern Hemisphere extratropics for a few decades prior to 1880, and there are a small number of station record s that extend back to previous centuries. However, we believe that analyses for these earlier years need to be carried out on a station by station basis with an attempt to discern the method and reliability of measurements at each station, a task beyond the scope of our analysis. Global studies of still earlier times depend upon incorporation of proxy measures of temperature change. References to such studies are provided in Hansen et al. (1999).

Programs used in the GISTEMP analysis and documentation on their use are available for download. The programs assume a Unix-like operating system and require familiarity with FORTRAN, C and Python for installation.

Updates to Analysis

Several minor updates to the analysis have been made since its last published description by Hansen et al. (2001).

August 2003: a longer version of Hohenpeissenberg station was made available to GISS and added to the GHCN record. This had no noticeable impact on the global analyses.

March 2005: SCAR data were added to the analysis. This increased data coverage over Antarctica, as evident in the global maps of temperature anomalies.

April 2006: A mask for ocean data applied to data after 1982 was applied to the whole series.

August 2007: A discontinuity in station records in the U.S. was discovered and corrected (GHCN data for 2000 and later years were inadvertently appended to USHCN data for prior years without including the adjustments at these stations that had been defined by the NOAA National Climate Data Center). This had a small impact on the U.S. average temperature, about 0.15C, for 2000 and later years, and a negligible effect on global temperature.

This August 2007 change received international attention via discussions on various blogs, and repetition by some other media, with no graphs provided to show the magnitude of the effect. We provide **here** graphs showing the effect on U.S. and global temperature. Discussions of the curious misinformation are provided HERE and HERE. (links to the discussions on Columbia web page)

September 2007: The year 2000 version of USHCN data was replaced by the current version (with data through 2005). In this newer version NOAA removed a number of stations that did not satisfy quality control checks. The stations removed by NOAA in the newer version included all of those that had failed our quality control check, so our analysis program no longer removes any U.S. stations from USHCN records. Our quality control is described by Hansen et al. (2001) and all stations removed by it our available in a **list.** The effect of station removal on analyzed global temperature is very small, as shown by graphs and maps **available here.**

Annual Summations

NASA news releases about the GISS surface temperature analysis are available for 2006, 2005, and 2004.

We also provide here discussions of global surface temperature trends for 2005, 2004, 2003, 2002, and 2001.

Table Data: Global and Zonal Mean Anomalies dT_s

Anomaly values indicate difference from the corresponding 1951-1980 means.

Table of **global**-mean monthly, annual and seasonal dT_s based on met.station data, 1880-present, updated through most recent month
Table of **N. Hemi**-mean monthly, annual and seasonal dT_s based on met.station data, 1880-present, updated through most recent month
Table of **S. Hemi**-mean monthly, annual and seasonal dT_s based on met.station data, 1880-present, updated through most recent month
Table of **global**-mean monthly, annual and seasonal land-ocean temperature index, 1880-present, updated through most recent month
Table of **zonal**-mean annual dT_s, 1880-present, updated through most recent completed year
Table of **zonal**-mean annual land-ocean temperature index, 1880-present, updated through most recent completed year

Gridded Monthly Maps of Temperature Anomaly Data

Users interested in the entire gridded temperature anomaly data may download the three basic binary files from our ftp site. Also available there are two sample FORTRAN programs, "SBBX_to_1x1.f" and "sbbx2nc.f", which demonstrate how you can extract gridded anomaly files for any month and year from the larger datasets.

Data files for individual years may be obtained from the ftp site's subdirectories: bin for binary format, txt for ASCII text, and netcdf for netCDF. However, these files are updated irregularly and the latest year or two of annual data might not be available.

Anomalies and Absolute Temperatures

Our analysis concerns only temperature anomalies, **not** absolute temperature. Temperature anomalies are computed relative to the base period 1951-1980. The reason to work with anomalies, rather than absolute temperature is that absolute temperature varies markedly in short distances, while monthly or annual temperature anomalies are representative of a much larger region. Indeed, we have shown (Hansen and Lebedeff, 1987) that temperature anomalies are strongly correlated out to distances of the order of 1000 km. For a more detailed discussion, see The Elusive Absolute Surface Air Temperature.

References

Please see the GISTEMP references page for citations to publications related to this research.

Copies of many of our papers are available in the GISS publications database. Re-prints not available there may be obtained by request from Dr. James Hansen.

Contacts

Please address scientific inquiries about the GISTEMP analysis to Dr. James Hansen.

Please address technical questions about these GISTEMP webpages to Dr. Reto Ruedy.

Also participating in the GISTEMP analysis are Dr. Makiko Sato and Dr. Ken Lo.

Subject: Re: "graphs" page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 15 Sep 2007 13:42:08 -0400
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Not quite sure what locations are being referred to, but we need to have all key info on the first page of GISTEMP. What I am hoping is that Rob can make a clever way of having everything important there in a small enough space, e.g., by starting out with the first few lines of paragraph of a section that is completed in an attachment. Thus the main page will direct users to the important results, with an indication of what they include.

I can see why the public has been confused as we presently offer practically no identifiable explanation of recent changes.

I think that it is important to put this stuff up soon. It does not need to be the final format and the list of changes does not have to be complete. But try to avoid putting up something that is later embarrassing.

Jim

On 9/15/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> On 9/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Jim, Makiko,
> >
> > Since the changes mainly affect this page and the station data page,
> > this is the proper place to put this section. We might want to add a
> > link to it on the station data page.
> >
> Yes, we were going to keep these in here.
>
> > On the station data page, we might also want to include the caveat, that
> > only the raw GHCN data are suitable for local studies; the other stages
> > are only useful to compute regional anomalies and trends for regions
> > larger than 300,000 square miles.
> >
> > It might be good to add in the "what's new" section to a) the
> > corresponding graph as in c).
> >
> We thought about it, but the difference in (a) and (c) are, for (c)
> there is no write-ups, and for (a) if you clcik, you can see graphs
> right away, so we just mentioned they show graphs and maps.
>
> > The section after "what's new" might profit from being titled "How does
> > 2007 compare to the 2 hottest years?"
>
> Yes, it is a good idea, so I will add it Monday.
>
> Thank you,
> Makiko

>
> Reto
>
> On Sat, 2007-09-15 at 05:35 -0400, Makiko Sato wrote:
> > Reto, Robert,
> >
> > Jim and I worked yesterday evening on "What's New" on the graphs page.
> > If there are some corrections/suggestions, please let me know. It is
> > pointing to a "Updates to Analysis" section on temperature home page
> > which doesn't exist until Jim gets back next Wed. or Thurs. , but he
> > said it is OK.
> >
> > Makiko
>

Subject: Re: Temp Page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sat, 15 Sep 2007 14:10:13 -0400
To: rruedy@giss.nasa.gov
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Robert Schmunk" <rschmunk@giss.nasa.gov>

With suggested editing below, I believe that this should allow a complete version of the new front page to GISTEMP. I think that you should go ahead and replace it without waiting for me to get back from
Jim

On 9/15/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> In the description of step2 (homogeneization) "urban" should be replaced by "urban and peri-urban" or "non-rural" or we may add a sentence to indicate that "small-town" stations are adjusted the same way as urban stations. Although it is mentioned at the end of the previous section, it should probably be repeated here to avoid accusations of inconsistency.

let's use: "urban and peri-urban (i.e., other than rural)"
that makes an unambiguous definition of our categories

> April 2006 modification:
> Looking at maps based on ocean data alone, we noticed that the HadISST data (1880-1981) extended to regions containing sea ice, whereas the NOAA data (1982-present) did not. In order to get a more consistent time series, the HadISST part was restricted to the same ice-free regions as the NOAA data. Since the temperature of water containing ice is always near the freezing point, including data from such regions tends to artificially dampen any heating or cooling trend.

April 2006 modification: HadISST ocean temperatures are now used only for regions that are identified as ice-free in both the NOAA and HadISST records. This change effects a small number of gridboxes in which HadISST has sea ice while NOAA has open water. The prior approach damped temperature change at these gridboxes because of specification of a fixed temperature in sea ice regions. The new approach still yields a conservative estimate of surface air temperature change, as surface air temperature usually changes markedly when sea ice is replaced by open water or vice versa. Because of the small area of these gridboxes the effect on global temperature change was negligible.

> Reto
>
> On Fri, 2007-09-14 at 19:49 -0400, James Hansen wrote:
> > Here is new text for the Web. Some inserts and corrections are
> > needed. The change made in April 2006 in unintelligible. As indicated,
> > it needs to include links to several graphs/maps made by Makiko. Some
> > parts of this, such as the Background probably need to be via link -- but
> > perhaps these sections should start out with the first few lines and then
> > .... to a link for the whole section?? All of the items in the list of
> > changes to the analysis should be included, but perhaps just the first line

> or so then... to a link??
>
> Jim
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Temp Page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 16 Sep 2007 05:12:04 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Great. It is not so long as I feared, let's use it this way. In the August 2003 item put "station data" where it presently says "station". In the August 2007 item replace the sentence "We provide here..." with Graphs showing the effect of this change on U.S. and global temperature are available here.

I think that you can put them up temporarily with the direct links to the Columbia web page, and later replace that to a link to just the graphs and discussion of the graphs extracted from the Columbia web page and placed in a GISS repository. That specific discussion of graphs should also note that discussion of the significance of the changes is included on the Columbia web site giving the location (and perhaps also the RealClimate location?) of the web site (it can just be the web site, without going directly to the articles on GISTEMP). I understand your concern, but to ignore the misinformation is also a concern.

On 9/16/07, **Robert B. Schmunk** <Robert.B.Schmunk@nasa.gov> wrote:

> A preliminary re-working of the GISTEMP homepage is at
>
> http://data.giss.nasa.gov/gistemp/index_new.html
>
> Although very long, it could go up as-is in place of the
> current GISTEMP homepage except that the links to the
> Columbia webpage stuff are not there yet (i.e ., in the
> second para of the Aug 2007 update comments).
>
> I am very concerned about linking directly to the PDFs on
> the Columbia webpage, whether here or on the graphs page as
> Makiko has already done, because it is transparent to the
> user that the PDFs are located on Jim's personal webpage.
> All they know is that they click on a link on a NASA webpage
> and they get a PDF. Hence the inattentive user (which would
> be most of them) would think the PDF is a NASA document.
>
> So on Sunday I will try to make a pass through the PDFs
> and extract out the material which can be posted on a
> NASA webpage. I would assume this would mostly mean toning
> down or eliminating language re: skeptics and denialists.
>
> Also, Makiko, I cleaned up the HTML of the "what's new" you
> put at the start of the graphs webpage. Is the "(a)", "(b)",
> "(c)" notation necessary? I left it there, but can't see that
> it needs to be there.
>
> rbs

Subject: Re: Temp Page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Sun, 16 Sep 2007 05:12:04 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, "Reto Ruedy" <rruedy@giss.nasa.gov>

Great. It is not so long as I feared, let's use it this way. In the August 2003 item put "station data" where it presently says "station". In the August 2007 item replace the sentence "We provide here..." with Graphs showing the effect of this change on U.S. and global temperature are available here.

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> put at the start of the graphs webpage. Is the "(a)", "(b)",
> "(c)" notation necessary? I left it there, but can't see that
> it needs to be there.
>
> rbs

On Sep 15, 2007, at 14:53, Makiko Sato wrote:

> Reto,
>
> It means that Robert will put them on the GISS temperature front page
> and you will check if that is the way Jim wants?
>
> Makiko
>
> On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
>> With suggested editing below, I believe that this should allow a
>> complete
>> version of the new front page to GISTEMP. I think that you should
>> go ahead
>> and replace it without waiting for me to get back from Jim
>>
>> On 9/15/07, Reto Ruedy < rruedy@giss.nasa.gov> wrote:
>>> Jim,
>>>
>>> In the description of step2 (homogeneization) "urban" should be
>>> replaced
>>> by "urban and peri-urban" or "non-rural" or we may add a sentence to
>>> indicate that "small-town" stations are adjusted the same way as
>>> urban
>>> stations. Although it is mentioned at the end of the previous
>>> section,
>>> it should probably be repeated here to avoid accusations of
>>> inconsistency.
>>
>> let's use: "urban and peri-urban (i.e., other than rural)"
>> that makes an unambiguous definition of our categories
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>>> Looking at maps based on ocean data alone, we noticed that the
>>> HadISST
>>> data (1880-1981) extended to regions containing sea ice, whereas the
>>> NOAA data (1982-present) did not. In order to get a more
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>>> series, the HadISST part was restricted to the same ice-free
>>> regions as
>>> the NOAA data. Since the temperature of water containing ice is
>>> always

>>> near the freezing point, including data from such regions tends to
>>> artificially dampen any heating or cooling trend.
>> April 2006 modification: HadISST ocean temperatures are now used
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>> regions that are identified as ice-free in both the NOAA and HadISST
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>> HadISST
>> has sea ice while NOAA has open water. The prior approach damped
>> temperature change at these gridboxes because of specification of
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>> temperature in sea ice regions. The new approach still yields a
>> conservative estimate of surface air temperature change, as
>> surface air
>> temperature usually changes markedly when sea ice is replaced by
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>> or vice versa. Because of the small area of these gridboxes the
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>>>> Makiko. Some
>>>> parts of this, such as the Background probably need to be via
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>>>> perhaps these sections should start out with the first few lines
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>>>> .... to a link for the whole section?? All of the items in the
>>>> list of
>>>> changes to the analysis should be included, but perhaps just the
>>>> first
>> line
>>>> or so then... to a link??
>>>>
>>>> Jim
>>> --
>>> Reto Ruedy <rruedy@giss.nasa.gov>
>>>
>>
>>
>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov

Subject: Re: Gistemp Changes
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 18:33:19 +0200
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov, gavin@giss.nasa.gov

Yes, you can make that change. Of course what I meant was in the places that mattered, Wall Street Journal, etc. there was no proper indication of the magnitude or relevance of the effect. Jim

On 9/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> We could fix this by changing "magnitude of the effect" by "relevance of the effect" which is obviously what you meant. Not that this will prevent him from further maligning us.
>
> Reto
>
> On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:
> > Dear Sirs,
> >
> > I see that you have decided to report the change in methodology as
> > requested in my previous email. While you should have reported the
> > change in methodology when it was made, it is better late than never.
> >
> > In your new webpage, you state: " This August 2007 change received
> > international attention via discussions on various blogs and
> > repetition by some other media, with no graphs provided to show the
> > magnitude of the effect." This is incorrect and I request that you
> > correct this statement. On Aug 6, 2007, at Climate
> > Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were
> > provided to estimate the magnitude of the effect. The first graph
> > shown below estimated the impact on the U.S. temperature history at a
> > little more than 0.15 deg C. Despite having no access to your source
> > code, this proved to be an accurate estimate.
> >
> >
> >
> >
> > The next graph shown below shows the distribution of changes over the
> > 1221 U.S. stations, which are very substantial in individual cases.
> > Despite your professed concern for illustrating the impact of changes,
> > you did not yourself provide any graph to show the magnitude of the
> > changes on individual stations, nor did you even provide explicit
> > notice on your webpage that any changes had been made.
> >
> >
> >
> >

> Would you please correct the incorrect information on your webpage.
> This request is made pursuant to the Data Quality Act.
> Yours truly,
>
> Stephen McIntyre
>
>
>
>
>
>
> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre
> Cc: James E. Hansen
> Subject: Re: Gistemp Changes
>
>
> Dear Sir,
>
> As indicated in the description of our input files, we switched from
> the old year 2000 version of USHCN to the current version. The
> differences you noticed reflect corrections that were made by USHCN
> within the last six years.
>
>
> Reto A. Ruedy
>
>
> On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:
> > Dear Sirs, I notice that you've changed the historical data for some
> > US stations since Sep 7, 2007. In particular, I noticed that
> > temperatures for Detroit Lakes MN in the early part of the century
> > were reduced by nearly 0.5 deg C. These changes are subsequent to
> your
> > changes in August 2007 for the changing versions. To my knowledge,
> > there is no explanation for this most recent change and I was
> > wondering what the reason is.
> >
> >
> > Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes
> MN
> > and Aug 25, 2007 version.
> >
> > Thank you for your attention.
> >
> > Regards,
> >

Subject: Re: Questions on correction to flaw in NASA program
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 19:01:46 +0200
To: "mario@cseindia.org" <mario@cseindia.org>
CC: James.E.Hansen@nasa.gov, @gmail.com

Mario, in response to your and other requests we put what I believe should be a very clear explanation on the web page, including connections to graphs that show the magnitude of the matter. Please check it. Jim Hansen

On 9/17/07, **mario@cseindia.org** <mario@cseindia.org> wrote:

> Dear Dr. Hansen,
> I am with the Centre for Science and Environment, New Delhi, India and emailed you last week with some questions on the recently discovered flaw in the NASA program. That email is attached below for your reference. Requesting your comments to the questions. Thanking you.
>
> Kind regards,
>
> Mario D'Souza
> Research Associate
> Centre for Science and Environment
> 41, Tughlakabad Institutional Area
> New Delhi 110 062
> Tel: 91-11-29955778, 29955779 (Extn: 220)
> Fax: 91-11-29955879
> Email: mario@cseindia.org
>
> On 11 Sep 2007 at 11:16, James.E.Hansen@nasa.gov, hans wrote:
>
> > Dear Dr. Hansen,
> > I am with the Centre for Science and Environment (CSE), New Delhi,
> > India and writing to you in regards to the news about the recently
> > discovered flaw in NASA's program that computes the global surface
> > temperature. The story is for CSE's fortnightly magazine, Down To
> > Earth.
> >
> > As part of the background reading for the story, I read through your
> > comments and posts, 'The Real Deal: Usufruct & the Gorilla' in
> > particular. There were some questions that came up, and I request
> > your comments on these.
> >
> > (1) This is not no relevant but for the record, when did Steve McIntyre
> > contact GISS/NASA regarding the flaw?
> >
> > (2) Is there an official statement or news release by GISS about the
> > correction that could be quoted?
> >

> (3) I do realize that the ranking of warmest years in the U.S. is not so
> relevant, more so at the global scale. But for purposes of this story is
> there a table of the rankings prior and after the correction.
>
> (4) From what I understand the correction only affected U.S.
> temperatures only in 2000 and later. But your colleague Dr. Schmidt
> said earlier years were affected albeit only a minor change. He said it
> was due to adjustments made for rural vs. urban trends. His post I'm
> referring to is:
> {http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-that/ "
}http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-
> that/
>
> (5) Where could I find high resolution images of Figures 1, 2 and 3 in
> your post 'The Real Deal: Usufruct & the Gorilla.'
>
> Your post explained the scientific arguments quite well and I haven't
> asked questions on those. However, I request your permission to use
> material from your posts for the story. Thanking you,
>
> Kind regards,
>
> Mario D'Souza
> Research Associate
> Centre for Science and Environment
> 41, Tughlakabad Institutional Area
> New Delhi 110 062
> Tel: 91-11-29955778, 29955779 (Extn: 220)
> Fax: 91-11-29955879
> Email: mario@cseindia.org
>
>

Subject: Re: Gistemp Changes
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 19:03:43 +0200
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov, gavin@giss.nasa.gov

Ho, ho, that is nice -- you are enjoying sparring with him -- sure, go ahead with it. Jim

On 9/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> I made the change in the text. Do you think, that a direct response to McIntyre is needed ? Something like:
>
> Thanks for bringing to our attention that the term "magnitude of the effect" might be misunderstood as "size" rather than "relevance", magnitude having both meanings. We clarified our formulation correspondingly.
>
> Reto
>
> On Mon, 2007-09-17 at 18:33 +0200, James Hansen wrote:
> > Yes, you can make that change. Of course what I meant was in the
> > places that mattered, Wall Street Journal, etc. there was no proper
> > indication of the magnitude or relevance of the effect. Jim
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> > On 9/17/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
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> > > Dear Sirs,
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> >
> >
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> > Would you please correct the incorrect information on your
> webpage.
> > This request is made pursuant to the Data Quality Act.
> > Yours truly,
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> > Stephen McIntyre
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> > From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> > Sent: Friday, September 14, 2007 6:12 PM

> > To: Steve McIntyre
> > Cc: James E. Hansen
> > Subject: Re: Gistemp Changes
> >
> >
> > Dear Sir,
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> > As indicated in the description of our input files, we switched from
> > the old year 2000 version of USHCN to the current version. The
> > differences you noticed reflect corrections that were made by USHCN
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> > >
> > >
> > > Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes
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> > >
> > > Thank you for your attention.
> > >
> > > Regards,
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> > > Steve McIntyre
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> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >

> >
> --
> Reto Ruedy < rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: MPR follow-up
From: " @gmail.com>
Date: Tue, 18 Sep 2007 02:51:43 +0200
To: ' @gustavus.edu>
CC: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>

I cannot do both. Significant work requires blocks of time. I have been doing this long enough to know that I can accomplish almost nothing if I have an hour in the morning, then interview, then check out, afternoon there will be other things, relatives. I will be glad to do the interview in the afternoon, preferably the early afternoon. I am presently sufficiently worried about past due dates that I am up now at 3 AM Jim

On 9/17/07, @gustavus.edu> wrote:

> Jim,
>
> You have much more experience with the media than I so you are probably not surprised that we got a call earlier today indicating that we will need to inform MPR today if you are willing to have the in-studio interview on Monday, October 1, at 10 a.m. I know this is not your preferred time but I do hope that you can both accommodate this time and maximize this "free" day to accomplish the work you plan on attending to.
>
> Regardless of your decision, can you please let me know today?
>
> Thanks.

Subject: Re: Regarding the criticisms of McIntyre et al
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 18 Sep 2007 03:17:39 +0200
To: @sbsoft.com>
CC: James.E.Hansen@nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>, "Robert Schmunk" <rschmunk@giss.nasa.gov>

You make some good points. I think of my response as a blunt statement of the truth, but others can view it as editorializing. It is 3 AM so I just note that we did thank Mc He has tried to mislead in several ways. We only make changes that make scientific sense, and we should not stop doing that. We have now listed those on the first page of the temperature web page.

Regarding the question of editorializing...I did a lot of soul searching before noting in a talk two years ago that the global warming story was being distorted by special interests ..my Keeling talk at AGU ...most people now believe that this was a good thing to do...if we just report the science and do not make note of misinformation, it is not clear that the message gets out, and we are running out of time.

Jim Hansen

On 9/18/07, @sbsoft.com> wrote:

> Dear Sir:
>
> I don't understand your recent approach in dealing with the recent criticisms of Steve McIntyre and friends.
>
> As you recently noted (and McIntyre agrees), none of these criticisms have a material effect on global temperature.
>
> The credibility of GISS (and other organizations aggregating temperature data) DOES have a material impact on any analysis of global temperature.
>
> If McIntyre shows that you have an agenda, then your data (and the conclusions supported by your data) are weakened.
>
> By making undocumented changes to your methodology (which McIntyre subsequently dissects on his blog) you provide ammunition to those who insist that you have agenda, and that your agenda is tainting your data.
>
> Why not adopt an ultraconservative approach in all of the changes that you make? Why not:
>
> 1. avoid making changes except in the case of outright errors
> 2. publicly document all changes at the time they occur
> 3. graciously thank McIntyre et all for any errors they bring to your attention

4. avoid making editorial statements, and let the data speak for itself.

It makes no difference whether 1934 or 1998 was warmer in the United States. But your recent statements and changes have created the impression that GISS cares about this issue, and is willing to change its methodology accordingly.

It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: Fwd: Regarding the criticisms of McIntyre et al
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 18 Sep 2007 09:00:37 +0200
To: @hotmail.com>

--------- Forwarded message ---------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Sep 18, 2007 3:17 AM
Subject: Re: Regarding the criticisms of McIntyre et al
To: @sbsoft.com>
Cc: James.E.Hansen@nasa.gov , Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Robert Schmunk < rschmunk@giss.nasa.gov>

You make some good points. I think of my response as a blunt statement of the truth, but others can view it as editorializing. It is 3 AM so I just note that we did thank Mc He has tried to mislead in several ways. We only make changes that make scientific sense, and we should not stop doing that. We have now listed those on the first page of the temperature web page.

Regarding the question of editorializing...I did a lot of soul searching before noting in a talk two years ago that the global warming story was being distorted by special interests ..my Keeling talk at AGU ...most people now believe that this was a good thing to do...if we just report the science and do not make note of misinformation, it is not clear that the message gets out, and we are running out of time.

Jim Hansen

On 9/18/07, @sbsoft.com > wrote:

> Dear Sir:
>
> I don't understand your recent approach in dealing with the recent criticisms of Steve McIntyre and friends.
>
> As you recently noted (and McIntyre agrees), none of these criticisms have a material effect on global temperature.
>
> The credibility of GISS (and other organizations aggregating temperature data) DOES have a material impact on any analysis of global temperature.
>
> If McIntyre shows that you have an agenda, then your data (and the conclusions supported by your data) are weakened.
>
> By making undocumented changes to your methodology (which McIntyre subsequently dissects on his blog) you provide ammunition to those who insist that you have agenda, and that your agenda is tainting your data.

Why not adopt an ultraconservative approach in all of the changes that you make? Why not:

1. avoid making changes except in the case of outright errors
2. publicly document all changes at the time they occur
3. graciously thank McIntyre et all for any errors they bring to your attention
4. avoid making editorial statements, and let the data speak for itself.

It makes no difference whether 1934 or 1998 was warmer in the United States. But your recent statements and changes have created the impression that GISS cares about this issue, and is willing to change its methodology accordingly.

It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: Re: FW: climate change data
From: ' @gmail.com>
Date: Tue, 18 Sep 2007 23:50:32 +0200
To: lesgiss@verizon.net
CC: jhansen@giss.nasa.gov, James.Ritchotte@fco.gov.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Leslie,

I am in Denmark at a meeting on Arctic climate change, trying to convince scientists of the Arctic nations (I guess England is not included) that reduction of non-CO2 forcings, with a slowdown of CO2 emissions, could stabilize Arctic and global climate.

However, Mr. Ritchotte should be made aware that the minor flaw found in processing of 2000-2007 data did not alter the warmest years of U.S temperature and certainly not global temperature. This story was a mountain from a molehill constructed by global warming deniers. The actual story, and the misinformation, are available via the GISS web page, www.giss.nasa.gov - click on Data and Images and then on GISS Surface Temperature analysis.

Jim

On 9/18/07, **lesgiss@verizon.net** <lesgiss@verizon.net> wrote:

> Hi Jim:
>
> Would you have time to talk with this rep from the British Embassy?
>
> Thanks.
>
> Leslie
>
> Original Message:
> ---
> From: James.Ritchotte@fco.gov.uk
> Date: Tue, 18 Sep 2007 19:58:59 +0100
> To: lnolan@giss.nasa.gov
> Subject: climate change data
>
> Leslie,
> I hope this email finds you well. I would like to talk with you about the recent adjustment in climate change data that shifted the order of warmest years on record for the US. Can you please give me a call at your earliest convenience?
>
> Many thanks,
> James

James Ritchotte
Senior Policy Advisor, Climate Change & Sustainable Development
Global Issues Group
British Embassy, Washington
Tel: (202) 588-6879
FTN: 8430-6879

Subject: Re: web page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:14:50 +0200
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, @gmail.com>, "Reto Ruedy" <rruedy@giss.nasa.gov>

yes, thanks

On 9/19/07, **Robert B. Schmunk** <Robert.B.Schmunk@nasa.gov> wrote:

> I think Jim is referring to a sentence at the end of the Sept
> 2007 paragraph in the "updates to analysis", where it says,
> "The effect of station removal on analyzed global temperature
> is very small, as shown by graphs and maps available here."
> That should apparently link to the graphs page, so I have
> added the missing link.
>
> rbs
>
>
> On Sep 18, 2007, at 18:06, Makiko Sato wrote:
>
> > What data comparison? The comparison due to the newest change,
> > i.e. USHCN from 2000 to current version, is still there. I wrote
> > "Tables: Global, US" in a separate line below the graphs, but now
> > Robert changed to "Also see tables of comparisons for <http://
> > data.giss.nasa.gov/gistemp/graphs/GLB_USHCN.2005vs1999.txt>globe
> > and <http://data.giss.nasa.gov/gistemp/graphs/US_USHCN.
> > 2005vs1999.txt >US-only." as an additional sentence, so you may have
> > not noticed it.
> >
> > Otherwise, I don't remember the data comparison. I can make such
> > things for USHCN/GHCN problem fixing.
> >
> > Makiko
> >
> > At 17:52 2007/09/18, wrote:
> >> At one point on the web page I note that it says a data comparison
> >> is available "here", but it is not avialable. Jim
> >
>
> --
> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
> 10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:16:59 +0200
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>

If there are any links to them other than the one where it is described as to my personal Columbia web page, the additional ones should be removed.

On 9/18/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> Jim,
>
> I have a feeling that many people don't like your "A Light On Upstairs?" and "Usefruct & the Gorilla". They are more your opinions than to show the effects of the changes (science). So, I thought we'd better have links only to graphs and maps I created for these write-ups, from GISS temperature first page and also from the Graphs section. But on the other hand, I don't like to keep changing things now (this way and that way listening to others opinions). What do you think?
>
> Makiko

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:43:32 +0200
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov

o.k.

On 9/19/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> Jim,
>
> Shall I remove the links to these and add a set of graphs and two
> sets of maps directly on this page? http://data.giss.nasa.gov/gistemp/graphs
>
> Makiko
>
> At 18:22 2007/09/18, Robert B. Schmunk wrote:
>
> >Makiko has a couple on the Graphs page.
> >
> >
> >On Sep 18, 2007, at 18:16, James Hansen wrote:
> >
> >>If there are any links to them other than the one where it is
> >>described as
> >>to my personal Columbia web page, the additional ones should be
> >>removed.
> >>
> >>On 9/18/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> >>>
> >>>Jim,
> >>>
> >>>I have a feeling that many people don't like your "A Light On
> >>>Upstairs?" and "Usefruct & the Gorilla". They are more your opinions
> >>>than to show the effects of the changes (science). So, I thought
> >>>we'd better have links only to graphs and maps I created for these
> >>>write-ups, from GISS temperature first page and also from the Graphs
> >>>section. But on the other hand, I don't like to keep changing things
> >>>now (this way and that way listening to others opinions). What do
> >>>you
> >>>think?
> >>>
> >>>Makiko
> >>>
> >
> >--
> >Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> >NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY

>10025

From: @gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Thursday, September 20, 2007 8:37 PM
To: David Herring
Cc: Cain, Darnell A. (GSFC-611.0)[SGT INC]; Mccarthy, Leslie M. (GISS-1300); Cahalan, Robert F. (GSFC-6132); Schmidt, Gavin A. (GISS-6110); Einaudi, Franco (GSFC-6100); Ruedy, Reto A. (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Subject: Re: Possible story about the temp record

David, I assume that you want to speak with others also. I believe that I have interviews at 1 PM and 3 PM. We can talk in between those or after. Also I have not double-checked that both of them are still on. Perhaps Darnell knows. Jim

On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov > wrote:
Dear Jim,

Thank you for the quick response. In that case, I'll come up next Friday, September 21, for a late afternoon interview. I'm guessing I would need less than an hour of our time, but please tell me about what time you would like me to be there.

With best regards,

David

At 12:08 PM -0400 9/14/07, James Hansen wrote:

> Hi David, September 19 I am September 21 would work but I have several interviews that day that do not end until mid afternoon, so you would need to stay for a late afternoon discussion. September 25 could work, in between some other discussions, on the 24th and 26th I will not be in office (at Clinton Initiative on the 26th - you could come to that, but fee is $15,000 - they waived it for me). Jim
>
> On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov> wrote:
> Dear Jim,
>
> Bob Cahalan has asked me to travel to GISS to interview you directly so that we can produce an article for NASA's Earth Observatory about this topic, clarifying your important work in monitoring global surface temperature trends for the public.
>
> Looking at my schedule, I can take the train to New York next week on either September 19 or 21; or the following week on either September 24, 25, or 26. Would any of those days work for you? Please advise

as soon as possible so I can make travel arrangements.

I am looking forward to it.

Best regards,

David Herring

> At 8:45 AM -0400 8/24/07, Robert Cahalan wrote:
> >Jim,
> > Please give an estimated completion date for your writeup on
> >the temperature data adjustment, so Earth Observatory can make plans
> >to support it.
> >.Bob.
> >

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

From: @gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 21, 2007 10:04 AM
To: David Herring; Cain, Darnell A. (GSFC-611.0)[SGT INC]
Cc: Mccarthy, Leslie M. (GISS-1300); Ruedy, Reto A. (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmidt, Gavin A. (GISS-6110)
Subject: Re: Possible story about the temp record

David,

As the time we have to talk today may be limited, let me note a couple of things here:

I wrote a discussion for the GISS web page that should clarify the situation including the (in)significance of the recent minor flaw in the data stream. Please look at that discussion.

Note that the tactic of people such as the science fiction writer and the recent fellow is to focus on details without global understanding and insight. Of course if one looks at several thousand stations one can find some with flaws, but those flaws work in both directions (the one potentially large bias in one direction, urban warming, is dealt with explicitly).

These topics should be dealt with in some overall way without getting drawn into detail, as the latter is the aim of those who wish to confuse and deny the reality of global warming.

Rather an article should focus on the warming itself, e.g., a map of the anomalies for the first several years of this century. all of the major features on this map (greater warming in NH than SH, greater warming over land than ocean, Arctic warming, Antarctic Peninsula, etc. make sense physically and are expected due to increasing GHGs.

It is also important to put his in the longer time context. Thus the (two-part) graph in our recent PNAS paper [Makiko has an alternative, probably better, versions to the published one] showing the paleo records and modern data together for the key regions of Indian Ocean and Pacific Warm Pool is quite important.

These important matters can be connected to the 'data flaw' story by the fact that the data flaw has no impact on them whatever.

Jim

On 9/20/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:
David, I assume that you want to speak with others also. I believe that I have interviews at 1 PM and 3 PM. We can talk in between those or after. Also I have not double-checked that both of them are still on. Perhaps Darnell knows. Jim

On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov > wrote:
Dear Jim,

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Monday, September 24, 2007 6:22 PM
To: Reto Ruedy; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]
Subject: Fwd: Correcting "climate audit" regarding Wellington temperatures from the GISS website

--------- Forwarded message ---------
From: **David Wratt** <d.wratt@niwa.co.nz>
Date: Sep 24, 2007 5:33 PM
Subject: Correcting "climate audit" regarding Wellington temperatures from the GISS website
To: James.E.Hansen@nasa.gov, Robert.B.Schmunk@nasa.gov
Cc: j.salinger@niwa.co.nz, b.mullan@niwa.co.nz, j.renwick@niwa.co.nz , m.hollis@niwa.co.nz

Dear James and Robert

We've recently had a set of comments on Wellington New Zealand temperatures on the "climate audit" website brought to our attention. ("Help NASA find the lost city of Wellington New Zealand", http://www.climateaudit.org/?p=2092).

While we don't normally favour scientific analysis by blog, some of the comments seemed to be getting rather out of hand. We therefore provided a factual response, which I have copied below for your information.

Regards - David Wratt

>It is time to put on record - once again - what some contributors
>here already know: Fitting a linear trend to the entire unadjusted
>NASA GISS plot for Wellington is physically meaningless. This is
>because as time progresses this unadjusted plot uses uses
>measurements from different sites at different altitudes.
>
>Much of the data used by GISS comes from the site at Kelburn, which
>is in a park at about 125m above sea level. This data set does not
>start until January 1928. Before this, the Wellington measurements
>were taken much closer to sea level. For example from July 1912
>until December 1927 they were from a site in Thorndon, at 3m above
>sea level. As you know, there is a drop off of temperature with
>height which occurs (on average) in the atmosphere.
>
>We have made this point already to some people who continue to
>publicly misinterpret the unadjusted NASA GISS plot for Wellington
>in this way.
>
>I should also mention here that there is a further data set from

>measurements 4 m above sea level at Wellington Airport, commencing
>in January 1962.
>
>To find the real trend, you must make appropriate homogeneity
>adjustments which take account of the differences in height between
>the various measurement series and also use the time when the
>Kelburn and Wellington Airport temperature series overlap. When you
>do that, you will find a long-term warming trend for Wellington
>through the 20th century.

--

David S Wratt
General Manager, Climate Change,
NIWA, Private Bag 14-901
Wellington, New Zealand

Phone: +64 4 386 0588
Fax: +64 4 386 0574
email: d.wratt@niwa.cri.nz

Street address: Allen Building, NIWA
301 Evans Bay Parade, Wellington

From: James Hansen [jhansen@giss.nasa.gov]
Sent: Tuesday, September 25, 2007 7:39 PM
To: Hansen, James E. (GISS-6110)
Cc: Hansen, James E. (GISS-6110)
Subject: Talk to Your Grandfather & East-West Connection

to be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

Swift-Boating and Please Talk to Your Grandfather are at
http://www.columbia.edu/~jeh1/distro_Grandfather_70924.pdf

draft of Global Warming: East-West Connections is at:
http://www.columbia.edu/~jeh1/East-West_070925.pdf

criticisms welcome.

Jim

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 12:12 PM
To: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Cc: Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Fwd: Preliminary examination of HL87 bias method as applied to individual station records
Attachments: RussiaBiasYearly.jpg

Reto,
Have you had any dealings with this person? He seems more rational than the other.
Jim

---------- Forwarded message ----------
From: @charter.net>
Date: Sep 27, 2007 7:49 PM
Subject: Preliminary examination of HL87 bias method as applied to individual station records
To: James.E.Hansen@nasa.gov

Dear Dr. Hansen,

I understand you are extremely busy, but I wanted to pass along some analysis I have been doing on your method of combining individual temperature records for a single station using the "bias method", as described primarily in HL87.

My preliminary analysis of the method seems to show that it introduces an "artificial cooling" to station records before 1987. This cooling seems to be introduced primarily as a result of two things: the order selected for combining records and the fact that annual and quarterly temperatures are estimated prior to combining those records.

In HL87 you acknowledge: "One potential disadvantage of the method we have described for combining station records is that the results, in principle, depend on the ordering of the station records." However, the discussion that ensues is around different stations rather than different records for the same station. I am finding that, when using this method to combine records from a single station, the ordering of records has far more influence than expected.

The descriptions I have seen for ordering stations in your papers indicate that they are ordered from greatest number of years of temperature record to the least number of years. In practice what I find is that if an MCDW (Monthly Climatic Data for the World) record exists, it is used first, even though it is usually the shortest record (when it exists. it also the latest record for a station). Because it is the first record in the order, it is never biased, but all others preceding it chronologically are biased. The overlap period with preceding records seems to be somewhat short - usually four years, sometimes five. Although HL87 discusses the combination of stations within a gridcell, the implication is that the same methodology is used for combining station records. This would mean the minimum overlap period should be 20 years.

In reading HL87 I would have expected the period of overlap to be calculated using the months of overlap, which represents the finest grain of measurement in the record GISS uses. Instead, I have determined that the annual record is used, which is the coarsest grain of measurement in the record used by GISS. If the monthly records were complete, this would not be an issue. In practice I find that they are usually not complete, so an

estimated annual average is often used when determining overlap periods. In fact, the first year in a record is almost always an estimate. This is because the records begin in January, but the average is calculated from December to November. Thus, the "missing" December value must be estimated. The process of estimating annual averages prior to combining individual records for a station is not one that I have found documented thus far.

As chance would have it, the process of combining records using MCDW records first, the short overlap period between MCDW records and previous records, and the fact that many annual averages are estimated, seems to yield a clear cooling bias to pre-1991 temperature records. An example can be seen here with the Russian records.

While I understand the rationale behind using the bias method to combine station records within a grid cell, I don't fully understand why it is used to combine separate records for an individual station. As you note in your 1999 paper "in the majority of cases the overlapping portions of the two records are identical, representing the same measurements that have made their way into more than one data set." This indicates that a simple average of the records is appropriate.

Why is the bias method better than the following?:
- For each station examine all monthly records for the station simultaneously
- If no valid measurement exists in any record for a given month, record NA (or equivalent)
- If exactly one valid measurement exists for a given month, use that value
- If more than one valid measurement exists for a given month, use the average of all valid measurements

After all records have been combined in this manner, estimate missing annual values where possible.

I appreciate your thoughts on this.

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Fridav. September 28, 2007 12:15 PM
To: @aol.com
Cc: Reto Ruedy; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Subject: Re: Temperatures

click on the words above the figure of interest. Jim Hansen

On 9/28/07, : @aol.com < @aol.com> wrote:
Hello James,

My name is and Ii am interested in Climate Change.

I read the article on http://data.giss.nasa.gov/gistemp/ but I am not sure where I can find the actual data showing the specific temperatures over a given period of time. Can you direct me or am I missing something on that page.

Thanks and Regards,

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 1:07 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

Hmm - it seems that I didn't check very closely what Jay was doing. Some of the choices do not seem to be the way that we intended them to be. it looks like we had better fix those and see what difference it makes. I thought that we started with the longest record? There could be a rationale for starting with the closest record, and, if it was shown that it didn't matter, perhaps there is a rationale for something different. Jim

On 9/28/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
Jim,

I dealt with him yesterday since some station graphs no longer appeared (probably as a consequence of some errors in the program used to automatically create the station data tables - a program he subsequently corrected). I had to clean out the work directory to make the utilities function again.

His inquiry and response definitely lacked McIntyre's haughty and aggressive tone. But we did not get into any discussions.

As far as his comments are concerned, I don't exactly remember how much freedom we gave Jay to design the procedure to combine station records at the same location and how much testing he did.

In the bias procedure used to combine anomaly series, we use a separate bias for each month, Jay uses a single annual bias to combine temperature series at the same location, but we require a shorter overlap period in that case (4 years vs 20 years - maybe that's why we made the switch from monthly to annual bias).

I don't remember why Jay ranked stations with respect to their sources and always starts with MCDW-data if such data are available rather than using length only - maybe for reasons of continuity (before using GHCN, MCDW was our main source).

I doubt very much that the specific way to handle multiple records matters as far as US or global mean series are concerned. That our method introduces no systematic bias is confirmed by the fact that our and NOAA's totally different approach gives virtually the same answers.

Reto

On Fri, 2007-09-28 at 12:12 -0400, James Hansen wrote:

> Reto,
> Have you had any dealings with this person? He seems more rational
> than the other.
> Jim
>
> --------- Forwarded message ----------
> From: . @charter.net>
> Date: Sep 27, 2007 7:49 PM
> Subject: Preliminary examination of HL87 bias method as applied to
> individual station records
> To: James.E.Hansen@nasa.gov
>
>
> Dear Dr. Hansen,
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> seems to be introduced primarily as a result of two things: the order
> selected for combining records and the fact that annual and quarterly
> temperatures are estimated prior to combining those records.
>
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> have described for combining station records is that the results, in
> principle, depend on the ordering of the station records." However,
> the discussion that ensues is around different stations rather than
> different records for the same station. I am finding that, when using
> this method to combine records from a single station, the ordering of
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> find is that if an MCDW (Monthly Climatic Data for the World) record
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> all others preceding it chronologically are biased. The overlap period
> with preceding records seems to be somewhat short - usually four
> years, sometimes five. Although HL87 discusses the combination of
> stations within a gridcell, the implication is that the same
> methodology is used for combining station records. This would mean the
> minimum overlap period should be 20 years.
>
> In reading HL87 I would have expected the period of overlap to be
> calculated using the months of overlap, which represents the finest
> grain of measurement in the record GISS uses. Instead, I have

> determined that the annual record is used, which is the coarsest grain
> of measurement in the record used by GISS. If the monthly records were
> complete, this would not be an issue. In practice I find that they are
> usually not complete, so an estimated annual average is often used
> when determining overlap periods. In fact, the first year in a record
> is almost always an estimate. This is because the records begin in
> January, but the average is calculated from December to November.
> Thus, the "missing" December value must be estimated. The process of
> estimating annual averages prior to combining individual records for a
> station is not one that I have found documented thus far.
>
> As chance would have it, the process of combining records using MCDW
> records first, the short overlap period between MCDW records and
> previous records, and the fact that many annual averages are
> estimated, seems to yield a clear cooling bias to pre-1991 temperature
> records. An example can be seen here with the Russian records.
>
>
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> While I understand the rationale behind using the bias method to
> combine station records within a grid cell, I don't fully understand
> why it is used to combine separate records for an individual station.
> As you note in your 1999 paper "in the majority of cases the
> overlapping portions of the two records are identical, representing
> the same measurements that have made their way into more than one data
> set." This indicates that a simple average of the records is
> appropriate.
>
> Why is the bias method better than the following?:
> - For each station examine all monthly records for the station
> simultaneously
> - If no valid measurement exists in any record for a given month,
> record NA (or equivalent)
> - If exactly one valid measurement exists for a given month, use that
> value
> - If more than one valid measurement exists for a given month, use the
> average of all valid measurements
>
> After all records have been combined in this manner, estimate missing
> annual values where possible.
>
> I appreciate your thoughts on this.
>
>
>
>
>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 2:21 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

I remember that in the regular case we tried closeness and length of record and decided that length of record was more important. Jim

On 9/28/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
In our gridding program, we combine the records strictly according to length of records. Closeness might be an alternative, but a station near the center of a subgrid box with a 20-year record might create a short time series for that subbox based on a single station.

In Jay's case, closeness is moot, since all records refer to the same location.

Reto

On Fri, 2007-09-28 at 13:06 -0400, James Hansen wrote:
> Hmm - it seems that I didn't check very closely what Jay was doing.
> Some of the choices do not seem to be the way that we intended them to
> be. it looks like we had better fix those and see what difference it
> makes. I thought that we started with the longest record? There
> could be a rationale for starting with the closest record, and, if it
> was shown that it didn't matter, perhaps there is a rationale for
> something different. Jim
>
> On 9/28/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Jim,
>
> I dealt with him yesterday since some station graphs no longer
> appeared
> (probably as a consequence of some errors in the program
> used to
> automatically create the station data tables - a program he
> subsequently
> corrected). I had to clean out the work directory to make the
> utilities
> function again.
>
> His inquiry and response definitely lacked McIntyre's haughty
> and
> aggressive tone. But we did not get into any discussions.
>
> As far as his comments are concerned, I don't exactly remember

> how much
> freedom we gave Jay to design the procedure to combine station records
> at the same location and how much testing he did.
>
> In the bias procedure used to combine anomaly series, we use a separate
> bias for each month, Jay uses a single annual bias to combine
> temperature series at the same location, but we require a shorter
> overlap period in that case (4 years vs 20 years - maybe that's why we
> made the switch from monthly to annual bias).
>
> I don't remember why Jay ranked stations with respect to their sources
> and always starts with MCDW-data if such data are available rather than
> using length only - maybe for reasons of continuity (before using GHCN,
> MCDW was our main source).
>
> I doubt very much that the specific way to handle multiple records
> matters as far as US or global mean series are concerned. That our
> method introduces no systematic bias is confirmed by the fact that our
> and NOAA's totally different approach gives virtually the same answers.
>
> Reto
>
>
> On Fri, 2007-09-28 at 12:12 -0400, James Hansen wrote:
> > Reto,
> > Have you had any dealings with this person? He seems more rational
> > than the other.
> > Jim
> >
> > ---------- Forwarded message ----------
> > From: @charter.net>
> > Date: Sep 27, 2007 7:49 PM
> > Subject: Preliminary examination of HL87 bias method as applied to
> > individual station records
> > To: James.E.Hansen@nasa.gov
> >
> >
> > Dear Dr. Hansen,

> >
> > I understand you are extremely busy, but I wanted to pass
> along some
> > analysis I have been doing on your method of combining
> individual
> > temperature records for a single station using the "bias
> method", as
> > described primarily in HL87.
> >
> > My preliminary analysis of the method seems to show that it
> introduces
> > an "artificial cooling" to station records before 1987. This
> cooling
> > seems to be introduced primarily as a result of two things:
> the order
> > selected for combining records and the fact that annual and
> quarterly
> > temperatures are estimated prior to combining those
> records.
> >
> > In HL87 you acknowledge: "One potential disadvantage of the
> method we
> > have described for combining station records is that the
> results, in
> > principle, depend on the ordering of the station records."
> However,
> > the discussion that ensues is around different stations
> rather than
> > different records for the same station. I am finding that,
> when using
> > this method to combine records from a single station, the
> ordering of
> > records has far more influence than expected.
> >
> > The descriptions I have seen for ordering stations in your
> papers
> > indicate that they are ordered from greatest number of years
> of
> > temperature record to the least number of years. In practice
> what I
> > find is that if an MCDW (Monthly Climatic Data for the
> World) record
> > exists, it is used first, even though it is usually the
> shortest
> > record (when it exists. it also the latest record for a
> station).
> > Because it is the first record in the order, it is never
> biased, but
> > all others preceding it chronologically are biased. The
> overlap period
> > with preceding records seems to be somewhat short - usually

> four
> > years, sometimes five. Although HL87 discusses the
> combination of
> > stations within a gridcell, the implication is that the same
> > methodology is used for combining station records. This
> would mean the
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> a record
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> > After all records have been combined in this manner,
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> > annual values where possible.
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> > I appreciate your thoughts on this.
> >
> >
> >
> >
> >
> >
> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov >

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Saturday, September 29, 2007 12:36 AM
To:
Cc: Hansen, James E. (GISS-6110); Reto Ruedy
Subject: Re: Preliminary examination of HL87 bias method as applied to individual station records

Hi

Thanks for the comments and suggestions. I spoke briefly with Reto. He has looked into the routine written by Jay Glascoe to combine records, and although its a language he is not familiar with, he says that he can at least make the simple changes needed to test the ordering of stations. Since we tested the ordering of stations in the main part of the program (we are not sure whether Jay rechecked that), we doubt that it would make a noticeable difference, but will let you know.

We didn't have time to discuss the other things yet. But I note that tests in the past have shown such choices to have small impact.

Regards, Jim Hansen

On 9/27/07, @charter.net> wrote:
Dear Dr. Hansen,

I understand you are extremely busy, but I wanted to pass along some analysis I have been doing on your method of combining individual temperature records for a single station using the "bias method", as described primarily in HL87.

My preliminary analysis of the method seems to show that it introduces an "artificial cooling" to station records before 1987. This cooling seems to be introduced primarily as a result of two things: the order selected for combining records and the fact that annual and quarterly temperatures are estimated prior to combining those records.

In HL87 you acknowledge: "One potential disadvantage of the method we have described for combining station records is that the results, in principle, depend on the ordering of the station records." However, the discussion that ensues is around different stations rather than different records for the same station. I am finding that, when using this method to combine records from a single station, the ordering of records has far more influence than expected.

The descriptions I have seen for ordering stations in your papers indicate that they are ordered from greatest number of years of temperature record to the least number of years. In practice what I find is that if an MCDW (Monthly Climatic Data for the World) record exists, it is used first, even though it is usually the shortest record (when it exists. it also the latest record for a station). Because it is the first record in the order, it is never biased, but all others preceding it chronologically are biased. The overlap period with preceding records seems to be somewhat short - usually four years, sometimes five. Although HL87 discusses the combination of stations within a gridcell, the implication is that the same methodology is used for combining station records. This would mean the minimum overlap period should be 20 years.

In reading HL87 I would have expected the period of overlap to be calculated using the months of overlap, which represents the finest grain of measurement in the record GISS uses. Instead, I have determined that the

annual record is used, which is the coarsest grain of measurement in the record used by GISS. If the monthly records were complete, this would not be an issue. In practice I find that they are usually not complete, so an estimated annual average is often used when determining overlap periods. In fact, the first year in a record is almost always an estimate. This is because the records begin in January, but the average is calculated from December to November. Thus, the "missing" December value must be estimated. The process of estimating annual averages prior to combining individual records for a station is not one that I have found documented thus far.

As chance would have it, the process of combining records using MCDW records first, the short overlap period between MCDW records and previous records, and the fact that many annual averages are estimated, seems to yield a clear cooling bias to pre-1991 temperature records. An example can be seen here with the Russian records.

While I understand the rationale behind using the bias method to combine station records within a grid cell, I don't fully understand why it is used to combine separate records for an individual station. As you note in your 1999 paper "in the majority of cases the overlapping portions of the two records are identical, representing the same measurements that have made their way into more than one data set." This indicates that a simple average of the records is appropriate.

Why is the bias method better than the following?:
- For each station examine all monthly records for the station simultaneously
- If no valid measurement exists in any record for a given month, record NA (or equivalent)
- If exactly one valid measurement exists for a given month, use that value
- If more than one valid measurement exists for a given month, use the average of all valid measurements

After all records have been combined in this manner, estimate missing annual values where possible.

I appreciate your thoughts on this.

Subject: Re: more mcintyre
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 03 Aug 2007 16:27:59 -0400
To: gs210@columbia.edu
CC: jhansen@giss.nasa.gov

Gavin,

In 2000, USHCN provided us with a product in which the US data were adjusted for changes in procedure/instrumentation to get a consistent time record. According to the description on their current website, 1999 was their last comprehensive update of those data. Unlike the GHCN data, the USHCN data are not routinely kept up-to-date (at this point the seem to end in 2002).

Under the assumption that the adjustments made the older data consistent with future data, we are replacing the US part of the GHCN data up to 1999 by the USHCN data that we got in 2000, thereby eliminating some known systematic biases in the early part of the US records.

However, that assumption may not have been correct. I compared the 1999 data in GHCN and USHCN. Indeed, in 490 of the 1057 stations the USHCN data were up to 1C colder than the corresponding GHCN data, in 77 stations the data were the same, and in the remaining 490 stations the USHCN data were warmer than the GHCN data. The differences averaged out to 0.1 C, i.e. we may have introduced a +0.1C jump in 2000 over the US by our procedure.

A more careful method would have been to compare the last few years of the USHCN data and the corresponding years of the GHCN data and adjust the USHCN data to fit the GHCN data. I'll add this procedure as an alternate to see what effect it would have.

Reto

On Fri, 2007-08-03 at 13:21 -0400, gs210@columbia.edu wrote:

> if you didn't see it:
>
> http://www.climateaudit.org/?p=1854
>
> There is something curious here though, why does 'GISS raw' go back to 'USHCN unadjusted' in 2000. Shouldn't it have stayed with USHCN+TOBS?
>
> Gavin
>
> PS. if this is all as it should be, we need to make clear the reasons why very quickly. Otherwise, the myth of the 'Hansen Y2k error' will be all around the place and once it's out, it won't go away.

Subject: Re: Gistemp Changes
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 18:33:19 +0200
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov, gavin@giss.nasa.gov

Yes, you can make that change. Of course what I meant was in the places that mattered, Wall Street Journal, etc. there was no proper indication of the magnitude or relevance of the effect. Jim

On 9/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

> Jim,
>
> We could fix this by changing "magnitude of the effect" by "relevance of the effect" which is obviously what you meant. Not that this will prevent him from further maligning us.
>
> Reto
>
> On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:
> > Dear Sirs,
> >
> > I see that you have decided to report the change in methodology as
> > requested in my previous email. While you should have reported the
> > change in methodology when it was made, it is better late than never.
> >
> > In your new webpage, you state: " This August 2007 change received
> > international attention via discussions on various blogs and
> > repetition by some other media, with no graphs provided to show the
> > magnitude of the effect." This is incorrect and I request that you
> > correct this statement. On Aug 6, 2007, at Climate
> > Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were
> > provided to estimate the magnitude of the effect. The first graph
> > shown below estimated the impact on the U.S. temperature history at a
> > little more than 0.15 deg C. Despite having no access to your source
> > code, this proved to be an accurate estimate.
> >
> >
> >
> >
> > The next graph shown below shows the distribution of changes over the
> > 1221 U.S. stations, which are very substantial in individual cases.
> > Despite your professed concern for illustrating the impact of changes,
> > you did not yourself provide any graph to show the magnitude of the
> > changes on individual stations, nor did you even provide explicit
> > notice on your webpage that any changes had been made.
> >
> >
> >
> >

> Would you please correct the incorrect information on your webpage.
> This request is made pursuant to the Data Quality Act.
> Yours truly,
>
> Stephen McIntyre
>
>
>
>
>
>
> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre
> Cc: James E. Hansen
> Subject: Re: Gistemp Changes
>
>
> Dear Sir,
>
> As indicated in the description of our input files, we switched from
> the old year 2000 version of USHCN to the current version. The
> differences you noticed reflect corrections that were made by USHCN
> within the last six years.
>
>
> Reto A. Ruedy
>
>
> On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:
> > Dear Sirs, I notice that you've changed the historical data for some
> > US stations since Sep 7, 2007. In particular, I noticed that
> > temperatures for Detroit Lakes MN in the early part of the century
> > were reduced by nearly 0.5 deg C. These changes are subsequent to
> your
> > changes in August 2007 for the changing versions. To my knowledge,
> > there is no explanation for this most recent change and I was
> > wondering what the reason is.
> >
> >
> > Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes
> MN
> > and Aug 25, 2007 version.
> >
> > Thank you for your attention.
> >
> > Regards,
> >

Subject: Re: Questions on correction to flaw in NASA program
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 19:01:46 +0200
To: "mario@cseindia.org" <mario@cseindia.org>
CC: James.E.Hansen@nasa.gov, @gmail.com

Mario, in response to your and other requests we put what I believe should be a very clear explanation on the web page, including connections to graphs that show the magnitude of the matter. Please check it. Jim Hansen

On 9/17/07, **mario@cseindia.org** <mario@cseindia.org> wrote:

> Dear Dr. Hansen,
> I am with the Centre for Science and Environment, New Delhi, India and emailed you last week with some questions on the recently discovered flaw in the NASA program. That email is attached below for your reference. Requesting your comments to the questions. Thanking you.
>
> Kind regards,
>
> Mario D'Souza
> Research Associate
> Centre for Science and Environment
> 41, Tughlakabad Institutional Area
> New Delhi 110 062
> Tel: 91-11-29955778, 29955779 (Extn: 220)
> Fax: 91-11-29955879
> Email: mario@cseindia.org
>
> On 11 Sep 2007 at 11:16, James.E.Hansen@nasa.gov, hans wrote:
>
> > Dear Dr. Hansen,
> > I am with the Centre for Science and Environment (CSE), New Delhi,
> > India and writing to you in regards to the news about the recently
> > discovered flaw in NASA's program that computes the global surface
> > temperature. The story is for CSE's fortnightly magazine, Down To
> > Earth.
> >
> > As part of the background reading for the story, I read through your
> > comments and posts, 'The Real Deal: Usufruct & the Gorilla' in
> > particular. There were some questions that came up, and I request
> > your comments on these.
> >
> > (1) This is not no relevant but for the record, when did Steve McIntyre
> > contact GISS/NASA regarding the flaw?
> >
> > (2) Is there an official statement or news release by GISS about the
> > correction that could be quoted?
> >

> (3) I do realize that the ranking of warmest years in the U.S. is not so
> relevant, more so at the global scale. But for purposes of this story is
> there a table of the rankings prior and after the correction.
>
> (4) From what I understand the correction only affected U.S.
> temperatures only in 2000 and later. But your colleague Dr. Schmidt
> said earlier years were affected albeit only a minor change. He said it
> was due to adjustments made for rural vs. urban trends. His post I'm
> referring to is:
> {http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-that/ "
}http://www.realclimate.org/index.php/archives/2007/08/1934-and-all-
> that/
>
> (5) Where could I find high resolution images of Figures 1, 2 and 3 in
> your post 'The Real Deal: Usufruct & the Gorilla.'
>
> Your post explained the scientific arguments quite well and I haven't
> asked questions on those. However, I request your permission to use
> material from your posts for the story. Thanking you,
>
> Kind regards,
>
> Mario D'Souza
> Research Associate
> Centre for Science and Environment
> 41, Tughlakabad Institutional Area
> New Delhi 110 062
> Tel: 91-11-29955778, 29955779 (Extn: 220)
> Fax: 91-11-29955879
> Email: mario@cseindia.org
>
>

Subject: Re: Gistemp Changes
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Mon, 17 Sep 2007 19:03:43 +0200
To: rruedy@giss.nasa.gov
CC: rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov, gavin@giss.nasa.gov

Ho, ho, that is nice -- you are enjoying sparring with him -- sure, go ahead with it. Jim

On 9/17/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:

Jim,

I made the change in the text. Do you think, that a direct response to McIntyre is needed ? Something like:

Thanks for bringing to our attention that the term "magnitude of the effect" might be misunderstood as "size" rather than "relevance", magnitude having both meanings. We clarified our formulation correspondingly.

Reto

On Mon, 2007-09-17 at 18:33 +0200, James Hansen wrote:
> Yes, you can make that change. Of course what I meant was in the
> places that mattered, Wall Street Journal, etc. there was no proper
> indication of the magnitude or relevance of the effect. Jim
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> > Stephen McIntyre
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> > From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> > Sent: Friday, September 14, 2007 6:12 PM

> > To: Steve McIntyre
> > Cc: James E. Hansen
> > Subject: Re: Gistemp Changes
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> > > Steve McIntyre
> > > --
> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >

> >
> --
> Reto Ruedy < rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: MPR follow-up
From: " @gmail.com>
Date: Tue, 18 Sep 2007 02:51:43 +0200
To: ' @gustavus.edu>
CC: "James Hansen" <jhansen@giss.nasa.gov>, "Darnell Cain" <dcain@giss.nasa.gov>

I cannot do both. Significant work requires blocks of time. I have been doing this long enough to know that I can accomplish almost nothing if I have an hour in the morning, then interview, then check out, afternoon there will be other things, relatives. I will be glad to do the interview in the afternoon, preferably the early afternoon. I am presently sufficiently worried about past due dates that I am up now at 3 AM Jim

On 9/17/07, @gustavus.edu> wrote:

> Jim,
>
> You have much more experience with the media than I so you are probably not surprised that we got a call earlier today indicating that we will need to inform MPR today if you are willing to have the in-studio interview on Monday, October 1, at 10 a.m. I know this is not your preferred time but I do hope that you can both accommodate this time and maximize this "free" day to accomplish the work you plan on attending to.
>
> Regardless of your decision, can you please let me know today?
>
> Thanks.

Subject: Re: Regarding the criticisms of McIntyre et al
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 18 Sep 2007 03:17:39 +0200
To: @sbsoft.com>
CC: James.E.Hansen@nasa.gov, "Reto Ruedy" <cdrar@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>, "Robert Schmunk" <rschmunk@giss.nasa.gov>

You make some good points. I think of my response as a blunt statement of the truth, but others can view it as editorializing. It is 3 AM so I just note that we did thank Mc He has tried to mislead in several ways. We only make changes that make scientific sense, and we should not stop doing that. We have now listed those on the first page of the temperature web page.

Regarding the question of editorializing...I did a lot of soul searching before noting in a talk two years ago that the global warming story was being distorted by special interests ..my Keeling talk at AGU ...most people now believe that this was a good thing to do...if we just report the science and do not make note of misinformation, it is not clear that the message gets out, and we are running out of time.

Jim Hansen

On 9/18/07, @sbsoft.com> wrote:

> Dear Sir:
>
> I don't understand your recent approach in dealing with the recent criticisms of Steve McIntyre and friends.
>
> As you recently noted (and McIntyre agrees), none of these criticisms have a material effect on global temperature.
>
> The credibility of GISS (and other organizations aggregating temperature data) DOES have a material impact on any analysis of global temperature.
>
> If McIntyre shows that you have an agenda, then your data (and the conclusions supported by your data) are weakened.
>
> By making undocumented changes to your methodology (which McIntyre subsequently dissects on his blog) you provide ammunition to those who insist that you have agenda, and that your agenda is tainting your data.
>
> Why not adopt an ultraconservative approach in all of the changes that you make? Why not:
>
> 1. avoid making changes except in the case of outright errors
> 2. publicly document all changes at the time they occur
> 3. graciously thank McIntyre et all for any errors they bring to your attention

4. avoid making editorial statements, and let the data speak for itself.

It makes no difference whether 1934 or 1998 was warmer in the United States. But your recent statements and changes have created the impression that GISS cares about this issue, and is willing to change its methodology accordingly.

It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: Fwd: Regarding the criticisms of McIntyre et al
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Tue, 18 Sep 2007 09:00:37 +0200
To: @hotmail.com>

---------- Forwarded message ----------
From: **James Hansen** <jhansen@giss.nasa.gov>
Date: Sep 18, 2007 3:17 AM
Subject: Re: Regarding the criticisms of McIntyre et al
To: @sbsoft.com>
Cc: James.E.Hansen@nasa.gov , Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Robert Schmunk < rschmunk@giss.nasa.gov>

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It makes little difference whether or not this is true. What matters is whether or not you have created a trail of data that would allow an observer to reach the conclusion that your agenda has impacted your actions.

I think you have, and that this is infinitely more damaging than a temperature adjustment here or there.

Sincerely,

Subject: Re: FW: climate change data
From: ' @gmail.com>
Date: Tue, 18 Sep 2007 23:50:32 +0200
To: lesgiss@verizon.net
CC: jhansen@giss.nasa.gov, James.Ritchotte@fco.gov.uk, "Reto Ruedy" <rruedy@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, "Makiko Sato" <makis@giss.nasa.gov>

Leslie,

I am in Denmark at a meeting on Arctic climate change, trying to convince scientists of the Arctic nations (I guess England is not included) that reduction of non-CO2 forcings, with a slowdown of CO2 emissions, could stabilize Arctic and global climate.

However, Mr. Ritchotte should be made aware that the minor flaw found in processing of 2000-2007 data did not alter the warmest years of U.S temperature and certainly not global temperature. This story was a mountain from a molehill constructed by global warming deniers. The actual story, and the misinformation, are available via the GISS web page, www.giss.nasa.gov - click on Data and Images and then on GISS Surface Temperature analysis.

Jim

On 9/18/07, **lesgiss@verizon.net** <lesgiss@verizon.net> wrote:

> Hi Jim:
>
> Would you have time to talk with this rep from the British Embassy?
>
> Thanks.
>
> Leslie
>
> Original Message:
> ---
> From: James.Ritchotte@fco.gov.uk
> Date: Tue, 18 Sep 2007 19:58:59 +0100
> To: lnolan@giss.nasa.gov
> Subject: climate change data
>
> Leslie,
> I hope this email finds you well. I would like to talk with you about the recent adjustment in climate change data that shifted the order of warmest years on record for the US. Can you please give me a call at your earliest convenience?
>
> Many thanks,
> James

James Ritchotte
Senior Policy Advisor, Climate Change & Sustainable Development
Global Issues Group
British Embassy, Washington
Tel: (202) 588-6879
FTN: 8430-6879

Subject: Re: web page
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:14:50 +0200
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: "Makiko Sato" <makis@giss.nasa.gov>, @gmail.com>, "Reto Ruedy" <rruedy@giss.nasa.gov>

yes, thanks

On 9/19/07, **Robert B. Schmunk** <Robert.B.Schmunk@nasa.gov> wrote:

> I think Jim is referring to a sentence at the end of the Sept
> 2007 paragraph in the "updates to analysis", where it says,
> "The effect of station removal on analyzed global temperature
> is very small, as shown by graphs and maps available here."
> That should apparently link to the graphs page, so I have
> added the missing link.
>
> rbs
>
>
> On Sep 18, 2007, at 18:06, Makiko Sato wrote:
>
> > What data comparison? The comparison due to the newest change,
> > i.e. USHCN from 2000 to current version, is still there. I wrote
> > "Tables: Global, US" in a separate line below the graphs, but now
> > Robert changed to "Also see tables of comparisons for <http://
> > data.giss.nasa.gov/gistemp/graphs/GLB_USHCN.2005vs1999.txt>globe
> > and <http://data.giss.nasa.gov/gistemp/graphs/US_USHCN.
> > 2005vs1999.txt >US-only." as an additional sentence, so you may have
> > not noticed it.
> >
> > Otherwise, I don't remember the data comparison. I can make such
> > things for USHCN/GHCN problem fixing.
> >
> > Makiko
> >
> > At 17:52 2007/09/18, wrote:
> >> At one point on the web page I note that it says a data comparison
> >> is available "here", but it is not avialable. Jim
> >
>
> --
> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
> 10025

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:16:59 +0200
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: rruedy@giss.nasa.gov, "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>

If there are any links to them other than the one where it is described as to my personal Columbia web page, the additional ones should be removed.

On 9/18/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> Jim,
>
> I have a feeling that many people don't like your "A Light On Upstairs?" and "Usefruct & the Gorilla". They are more your opinions than to show the effects of the changes (science). So, I thought we'd better have links only to graphs and maps I created for these write-ups, from GISS temperature first page and also from the Graphs section. But on the other hand, I don't like to keep changing things now (this way and that way listening to others opinions). What do you think?
>
> Makiko

Subject: Re: removing "Upstairs" & "Gorilla" from GISS T pages?
From: "James Hansen" <jhansen@giss.nasa.gov>
Date: Wed, 19 Sep 2007 00:43:32 +0200
To: "Makiko Sato" <makis@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>, rruedy@giss.nasa.gov

o.k.

On 9/19/07, **Makiko Sato** <makis@giss.nasa.gov> wrote:

> Jim,
>
> Shall I remove the links to these and add a set of graphs and two
> sets of maps directly on this page? http://data.giss.nasa.gov/gistemp/graphs
>
> Makiko
>
> At 18:22 2007/09/18, Robert B. Schmunk wrote:
>
> >Makiko has a couple on the Graphs page.
> >
> >
> >On Sep 18, 2007, at 18:16, James Hansen wrote:
> >
> >>If there are any links to them other than the one where it is
> >>described as
> >>to my personal Columbia web page, the additional ones should be
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> >>
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> >>>
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> >>>Upstairs?" and "Usefruct & the Gorilla". They are more your opinions
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> >>>you
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> >>>
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> >>>
> >
> >--
> >Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> >NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY

>10025

From: @gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Thursday, September 20, 2007 8:37 PM
To: David Herring
Cc: Cain, Darnell A. (GSFC-611.0)[SGT INC]; Mccarthy, Leslie M. (GISS-1300); Cahalan, Robert F. (GSFC-6132); Schmidt, Gavin A. (GISS-6110); Einaudi, Franco (GSFC-6100); Ruedy, Reto A. (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Subject: Re: Possible story about the temp record

David, I assume that you want to speak with others also. I believe that I have interviews at 1 PM and 3 PM. We can talk in between those or after. Also I have not double-checked that both of them are still on. Perhaps Darnell knows. Jim

On 9/14/07, **David Herring** <dherring@climate.gsfc.nasa.gov > wrote:
Dear Jim,

Thank you for the quick response. In that case, I'll come up next Friday, September 21, for a late afternoon interview. I'm guessing I would need less than an hour of our time, but please tell me about what time you would like me to be there.

With best regards,

David

At 12:08 PM -0400 9/14/07, James Hansen wrote:

> Hi David, September 19 I am September 21 would work but I have several interviews that day that do not end until mid afternoon, so you would need to stay for a late afternoon discussion. September 25 could work, in between some other discussions, on the 24th and 26th I will not be in office (at Clinton Initiative on the 26th - you could come to that, but fee is $15,000 - they waived it for me). Jim
>
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> Dear Jim,
>
> Bob Cahalan has asked me to travel to GISS to interview you directly so that we can produce an article for NASA's Earth Observatory about this topic, clarifying your important work in monitoring global surface temperature trends for the public.
>
> Looking at my schedule, I can take the train to New York next week on either September 19 or 21; or the following week on either September 24, 25, or 26. Would any of those days work for you? Please advise

as soon as possible so I can make travel arrangements.

I am looking forward to it.

Best regards,

David Herring

> At 8:45 AM -0400 8/24/07, Robert Cahalan wrote:
> >Jim,
> > Please give an estimated completion date for your writeup on
> >the temperature data adjustment, so Earth Observatory can make plans
> >to support it.
> >.Bob.
> >

--

David Herring
Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

From: @gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 21, 2007 10:04 AM
To: David Herring; Cain, Darnell A. (GSFC-611.0)[SGT INC]
Cc: Mccarthy, Leslie M. (GISS-1300); Ruedy, Reto A. (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmidt, Gavin A. (GISS-6110)
Subject: Re: Possible story about the temp record

David,

As the time we have to talk today may be limited, let me note a couple of things here:

I wrote a discussion for the GISS web page that should clarify the situation including the (in)significance of the recent minor flaw in the data stream. Please look at that discussion.

Note that the tactic of people such as the science fiction writer and the recent fellow is to focus on details without global understanding and insight. Of course if one looks at several thousand stations one can find some with flaws, but those flaws work in both directions (the one potentially large bias in one direction, urban warming, is dealt with explicitly).

These topics should be dealt with in some overall way without getting drawn into detail, as the latter is the aim of those who wish to confuse and deny the reality of global warming.

Rather an article should focus on the warming itself, e.g., a map of the anomalies for the first several years of this century. all of the major features on this map (greater warming in NH than SH, greater warming over land than ocean, Arctic warming, Antarctic Peninsula, etc. make sense physically and are expected due to increasing GHGs.

It is also important to put his in the longer time context. Thus the (two-part) graph in our recent PNAS paper [Makiko has an alternative, probably better, versions to the published one] showing the paleo records and modern data together for the key regions of Indian Ocean and Pacific Warm Pool is quite important.

These important matters can be connected to the 'data flaw' story by the fact that the data flaw has no impact on them whatever.

Jim

On 9/20/07, **James Hansen** <jhansen@giss.nasa.gov> wrote:
David, I assume that you want to speak with others also. I believe that I have interviews at 1 PM and 3 PM. We can talk in between those or after. Also I have not double-checked that both of them are still on. Perhaps Darnell knows. Jim

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Project Manager for Education & Outreach
Earth Sciences Division, Code 610.3
NASA's Goddard Space Flight Center
Greenbelt, MD 20771
ph: 301-614-6219
fax: 301-614-6307
cell:

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Monday, September 24, 2007 6:22 PM
To: Reto Ruedy; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]
Subject: Fwd: Correcting "climate audit" regarding Wellington temperatures from the GISS website

---------- Forwarded message ----------
From: **David Wratt** <d.wratt@niwa.co.nz>
Date: Sep 24, 2007 5:33 PM
Subject: Correcting "climate audit" regarding Wellington temperatures from the GISS website
To: James.E.Hansen@nasa.gov, Robert.B.Schmunk@nasa.gov
Cc: j.salinger@niwa.co.nz, b.mullan@niwa.co.nz, j.renwick@niwa.co.nz , m.hollis@niwa.co.nz

Dear James and Robert

We've recently had a set of comments on Wellington New Zealand temperatures on the "climate audit" website brought to our attention. ("Help NASA find the lost city of Wellington New Zealand", http://www.climateaudit.org/?p=2092).

While we don't normally favour scientific analysis by blog, some of the comments seemed to be getting rather out of hand. We therefore provided a factual response, which I have copied below for your information.

Regards - David Wratt

>It is time to put on record - once again - what some contributors
>here already know: Fitting a linear trend to the entire unadjusted
>NASA GISS plot for Wellington is physically meaningless. This is
>because as time progresses this unadjusted plot uses uses
>measurements from different sites at different altitudes.
>
>Much of the data used by GISS comes from the site at Kelburn, which
>is in a park at about 125m above sea level. This data set does not
>start until January 1928. Before this, the Wellington measurements
>were taken much closer to sea level. For example from July 1912
>until December 1927 they were from a site in Thorndon, at 3m above
>sea level. As you know, there is a drop off of temperature with
>height which occurs (on average) in the atmosphere.
>
>We have made this point already to some people who continue to
>publicly misinterpret the unadjusted NASA GISS plot for Wellington
>in this way.
>
>I should also mention here that there is a further data set from

>measurements 4 m above sea level at Wellington Airport, commencing
>in January 1962.
>
>To find the real trend, you must make appropriate homogeneity
>adjustments which take account of the differences in height between
>the various measurement series and also use the time when the
>Kelburn and Wellington Airport temperature series overlap. When you
>do that, you will find a long-term warming trend for Wellington
>through the 20th century.

--

David S Wratt
General Manager, Climate Change,
NIWA, Private Bag 14-901
Wellington, New Zealand

Phone: +64 4 386 0588
Fax: +64 4 386 0574
email: d.wratt@niwa.cri.nz

Street address: Allen Building, NIWA
301 Evans Bay Parade, Wellington

From: James Hansen [jhansen@giss.nasa.gov]
Sent: Tuesday, September 25, 2007 7:39 PM
To: Hansen, James E. (GISS-6110)
Cc: Hansen, James E. (GISS-6110)
Subject: Talk to Your Grandfather & East-West Connection

to be removed from Jim Hansen's e-mail distribution respond with REMOVE as subject

Swift-Boating and Please Talk to Your Grandfather are at
http://www.columbia.edu/~jeh1/distro_Grandfather_70924.pdf

draft of Global Warming: East-West Connections is at:
http://www.columbia.edu/~jeh1/East-West_070925.pdf

criticisms welcome.

Jim

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 12:12 PM
To: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Cc: Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Fwd: Preliminary examination of HL87 bias method as applied to individual station records
Attachments: RussiaBiasYearly.jpg

Reto,
Have you had any dealings with this person? He seems more rational than the other.
Jim

---------- Forwarded message ----------
From: @charter.net>
Date: Sep 27, 2007 7:49 PM
Subject: Preliminary examination of HL87 bias method as applied to individual station records
To: James.E.Hansen@nasa.gov

Dear Dr. Hansen,

I understand you are extremely busy, but I wanted to pass along some analysis I have been doing on your method of combining individual temperature records for a single station using the "bias method", as described primarily in HL87.

My preliminary analysis of the method seems to show that it introduces an "artificial cooling" to station records before 1987. This cooling seems to be introduced primarily as a result of two things: the order selected for combining records and the fact that annual and quarterly temperatures are estimated prior to combining those records.

In HL87 you acknowledge: "One potential disadvantage of the method we have described for combining station records is that the results, in principle, depend on the ordering of the station records." However, the discussion that ensues is around different stations rather than different records for the same station. I am finding that, when using this method to combine records from a single station, the ordering of records has far more influence than expected.

The descriptions I have seen for ordering stations in your papers indicate that they are ordered from greatest number of years of temperature record to the least number of years. In practice what I find is that if an MCDW (Monthly Climatic Data for the World) record exists, it is used first, even though it is usually the shortest record (when it exists. it also the latest record for a station). Because it is the first record in the order, it is never biased, but all others preceding it chronologically are biased. The overlap period with preceding records seems to be somewhat short - usually four years, sometimes five. Although HL87 discusses the combination of stations within a gridcell, the implication is that the same methodology is used for combining station records. This would mean the minimum overlap period should be 20 years.

In reading HL87 I would have expected the period of overlap to be calculated using the months of overlap, which represents the finest grain of measurement in the record GISS uses. Instead, I have determined that the annual record is used, which is the coarsest grain of measurement in the record used by GISS. If the monthly records were complete, this would not be an issue. In practice I find that they are usually not complete, so an

estimated annual average is often used when determining overlap periods. In fact, the first year in a record is almost always an estimate. This is because the records begin in January, but the average is calculated from December to November. Thus, the "missing" December value must be estimated. The process of estimating annual averages prior to combining individual records for a station is not one that I have found documented thus far.

As chance would have it, the process of combining records using MCDW records first, the short overlap period between MCDW records and previous records, and the fact that many annual averages are estimated, seems to yield a clear cooling bias to pre-1991 temperature records. An example can be seen here with the Russian records.

While I understand the rationale behind using the bias method to combine station records within a grid cell, I don't fully understand why it is used to combine separate records for an individual station. As you note in your 1999 paper "in the majority of cases the overlapping portions of the two records are identical, representing the same measurements that have made their way into more than one data set." This indicates that a simple average of the records is appropriate.

Why is the bias method better than the following?:
- For each station examine all monthly records for the station simultaneously
- If no valid measurement exists in any record for a given month, record NA (or equivalent)
- If exactly one valid measurement exists for a given month, use that value
- If more than one valid measurement exists for a given month, use the average of all valid measurements

After all records have been combined in this manner, estimate missing annual values where possible.

I appreciate your thoughts on this.

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Fridav. September 28, 2007 12:15 PM
To: @aol.com
Cc: Reto Ruedy; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]
Subject: Re: Temperatures

click on the words above the figure of interest. Jim Hansen

On 9/28/07, : @aol.com < @aol.com> wrote:
Hello James,

My name is and Ii am interested in Climate Change.

I read the article on http://data.giss.nasa.gov/gistemp/ but I am not sure where I can find the actual data showing the specific temperatures over a given period of time. Can you direct me or am I missing something on that page.

Thanks and Regards,

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 1:07 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

Hmm - it seems that I didn't check very closely what Jay was doing. Some of the choices do not seem to be the way that we intended them to be. it looks like we had better fix those and see what difference it makes. I thought that we started with the longest record? There could be a rationale for starting with the closest record, and, if it was shown that it didn't matter, perhaps there is a rationale for something different. Jim

On 9/28/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
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I dealt with him yesterday since some station graphs no longer appeared (probably as a consequence of some errors in the program used to automatically create the station data tables - a program he subsequently corrected). I had to clean out the work directory to make the utilities function again.

His inquiry and response definitely lacked McIntyre's haughty and aggressive tone. But we did not get into any discussions.

As far as his comments are concerned, I don't exactly remember how much freedom we gave Jay to design the procedure to combine station records at the same location and how much testing he did.

In the bias procedure used to combine anomaly series, we use a separate bias for each month, Jay uses a single annual bias to combine temperature series at the same location, but we require a shorter overlap period in that case (4 years vs 20 years - maybe that's why we made the switch from monthly to annual bias).

I don't remember why Jay ranked stations with respect to their sources and always starts with MCDW-data if such data are available rather than using length only - maybe for reasons of continuity (before using GHCN, MCDW was our main source).

I doubt very much that the specific way to handle multiple records matters as far as US or global mean series are concerned. That our method introduces no systematic bias is confirmed by the fact that our and NOAA's totally different approach gives virtually the same answers.

Reto

On Fri, 2007-09-28 at 12:12 -0400, James Hansen wrote:

> Reto,
> Have you had any dealings with this person? He seems more rational
> than the other.
> Jim
>
> --------- Forwarded message ---------
> From: . @charter.net>
> Date: Sep 27, 2007 7:49 PM
> Subject: Preliminary examination of HL87 bias method as applied to
> individual station records
> To: James.E.Hansen@nasa.gov
>
>
> Dear Dr. Hansen,
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> I understand you are extremely busy, but I wanted to pass along some
> analysis I have been doing on your method of combining individual
> temperature records for a single station using the "bias method", as
> described primarily in HL87.
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> My preliminary analysis of the method seems to show that it introduces
> an "artificial cooling" to station records before 1987. This cooling
> seems to be introduced primarily as a result of two things: the order
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> In HL87 you acknowledge: "One potential disadvantage of the method we
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> this method to combine records from a single station, the ordering of
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> all others preceding it chronologically are biased. The overlap period
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> years, sometimes five. Although HL87 discusses the combination of
> stations within a gridcell, the implication is that the same
> methodology is used for combining station records. This would mean the
> minimum overlap period should be 20 years.
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> calculated using the months of overlap, which represents the finest
> grain of measurement in the record GISS uses. Instead, I have

> determined that the annual record is used, which is the coarsest grain
> of measurement in the record used by GISS. If the monthly records were
> complete, this would not be an issue. In practice I find that they are
> usually not complete, so an estimated annual average is often used
> when determining overlap periods. In fact, the first year in a record
> is almost always an estimate. This is because the records begin in
> January, but the average is calculated from December to November.
> Thus, the "missing" December value must be estimated. The process of
> estimating annual averages prior to combining individual records for a
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> records first, the short overlap period between MCDW records and
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> Why is the bias method better than the following?:
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> - If no valid measurement exists in any record for a given month,
> record NA (or equivalent)
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> average of all valid measurements
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> After all records have been combined in this manner, estimate missing
> annual values where possible.
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Reto Ruedy <rruedy@giss.nasa.gov >

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Friday, September 28, 2007 2:21 PM
To: Ruedy, Reto A. (GSFC-611.0)[SGT INC]
Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

I remember that in the regular case we tried closeness and length of record and decided that length of record was more important. Jim

On 9/28/07, **Reto Ruedy** <rruedy@giss.nasa.gov> wrote:
In our gridding program, we combine the records strictly according to length of records. Closeness might be an alternative, but a station near the center of a subgrid box with a 20-year record might create a short time series for that subbox based on a single station.

In Jay's case, closeness is moot, since all records refer to the same location.

Reto

On Fri, 2007-09-28 at 13:06 -0400, James Hansen wrote:
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> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>

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Reto Ruedy <rruedy@giss.nasa.gov >

From: gmail.com on behalf of James Hansen [jhansen@giss.nasa.gov]
Sent: Saturday, September 29, 2007 12:36 AM
To:
Cc: Hansen, James E. (GISS-6110); Reto Ruedy
Subject: Re: Preliminary examination of HL87 bias method as applied to individual station records

Hi

Thanks for the comments and suggestions. I spoke briefly with Reto. He has looked into the routine written by Jay Glascoe to combine records, and although its a language he is not familiar with, he says that he can at least make the simple changes needed to test the ordering of stations. Since we tested the ordering of stations in the main part of the program (we are not sure whether Jay rechecked that), we doubt that it would make a noticeable difference, but will let you know.

We didn't have time to discuss the other things yet. But I note that tests in the past have shown such choices to have small impact.

Regards, Jim Hansen

On 9/27/07, @charter.net> wrote:
Dear Dr. Hansen,

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After all records have been combined in this manner, estimate missing annual values where possible.

I appreciate your thoughts on this.

Subject: Re: more mcintyre
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 03 Aug 2007 16:27:59 -0400
To: gs210@columbia.edu
CC: jhansen@giss.nasa.gov

Gavin,

In 2000, USHCN provided us with a product in which the US data were adjusted for changes in procedure/instrumentation to get a consistent time record. According to the description on their current website, 1999 was their last comprehensive update of those data. Unlike the GHCN data, the USHCN data are not routinely kept up-to-date (at this point the seem to end in 2002).

Under the assumption that the adjustments made the older data consistent with future data, we are replacing the US part of the GHCN data up to 1999 by the USHCN data that we got in 2000, thereby eliminating some known systematic biases in the early part of the US records.

However, that assumption may not have been correct. I compared the 1999 data in GHCN and USHCN. Indeed, in 490 of the 1057 stations the USHCN data were up to 1C colder than the corresponding GHCN data, in 77 stations the data were the same, and in the remaining 490 stations the USHCN data were warmer than the GHCN data. The differences averaged out to 0.1 C, i.e. we may have introduced a +0.1C jump in 2000 over the US by our procedure.

A more careful method would have been to compare the last few years of the USHCN data and the corresponding years of the GHCN data and adjust the USHCN data to fit the GHCN data. I'll add this procedure as an alternate to see what effect it would have.

Reto

On Fri, 2007-08-03 at 13:21 -0400, gs210@columbia.edu wrote:

> if you didn't see it:
>
> http://www.climateaudit.org/?p=1854
>
> There is something curious here though, why does 'GISS raw' go back to 'USHCN unadjusted' in 2000. Shouldn't it have stayed with USHCN+TOBS?
>
> Gavin
>
> PS. if this is all as it should be, we need to make clear the reasons why very quickly. Otherwise, the myth of the 'Hansen Y2k error' will be all around the place and once it's out, it won't go away.

Subject: Re: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 06 Aug 2007 11:05:36 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>
CC: gavin@giss.nasa.gov, klo@giss.nasa.gov

Jim,

I've started to prepare a response to the email below. Steve is the person who appointed himself the auditor of all web sites and organizations that have to do with global warming in order to debunk this "hoax". He is maintaining a blog - a website called climate.audit.org, a site containing among justified concerns (caveats that we stress in all our papers) obvious fabrications and vicious attacks.

I'll send you my suggestion for a response before mailing anything to Steve.

Our simple combination of GHCN and USHCN data was based on the assumption that the correction made the older data consistent with the then current data. Unfortunately, that is not the case and an attempt to compute an offset based on the common years within say the 1990-1999 period would have been more appropriate.

I am re-processing our current data with that modification and wait with finishing my response until we can look at the changes caused by it. I expect only a minor effect since the offsets average out to almost 0 over all USHCN stations.

Reto

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.
>
> I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?
>
> In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention, Stephen McIntyre

Subject: Re: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 07 Aug 2007 10:04:44 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>, gavin@giss.nasa.gov

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

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> I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?

The basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence: "Input data for the analysis ,...., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

When we got the USHCN data, they ended in 1999 and as far as I know, no major corrections were implemented after that time. Unlike the GHCN data, the USHCN data is not a product that is kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend the USHCN data.

I agree with you that this simple procedure creates an artificial step in those cases where the correction was applied to the newest data, rather than bringing the older data in sync with the latest measurements - which would seem the natural way to go. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round.

So although an attempt to eliminate those artificial steps should have little impact even on the US temperature trend (much less the global trend - the so-called "Global Warming"), it seems a good idea to do so and I'd like to thank you for bringing this to our attention.

Starting with our next update (sometime later this week) an offset based on the last 10 years of overlap in the two data sets will be applied and our on-line documentation will be augmented correspondingly.

I tested the modification with the data now on display:
The table data (section 3 on the basic temperature site) differed occasionally by a 1 in the last digit (0.01 C). In the display most sensitive to that change - the US-graph of annual means - the warming decreased by about 0.15 C in the years 2000-2006, well within the margin of error.

> In addition, could you provide me with any documentation (additional" to already published material) providing information on the

> calculation of GISS raw and adjusted series from USHCN versions, including relevant source code.

I had no idea what code you are referring to until I learned from your article "Hansen's Y2K error" (which should really be "Reto's Y2K error") that GISS is in possession of some magical software that is able to "fix" the defects in surface data. No wonder you would like to get your hands on that - so would I !

Unfortunately, your source totally misled you in that respect. I'm a little amazed that you uncritically present it as a fact given that a large part of your web site is devoted to convincingly prove that such software cannot possibly exist.

All we do is try to make the best of imperfect data by converting absolute temperatures to anomalies and averaging over large regions (using circles of a diameter of 2400 km, the 500 km option was added for debugging purposes only), the only responsible way to use those data.

The software we spend close to 100% of our time in developing and which is the real basis or our work (in addition to general physics and chemistry), is openly available (giss.nasa.gov/tools/modelE) to anybody.

> Thank you for your attention, Stephen McIntyre

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: USHCN, GHCN matching
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 07 Aug 2007 12:51:04 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: jhansen@giss.nasa.gov, klo@giss.nasa.gov

Makiko,

Thanks - I assume, you will also replace all affected graphs on the GISTEMP website.

Reto

On Tue, 2007-08-07 at 12:48 -0400, Makiko Sato wrote:

> Jim, Reto, Ken,
>
> I put a graph which shows the US and global mean temperature change due to matching 1990-1999 mean USHCN and GHCN on
> http://www.giss.nasa.gov/~makis/GISS_Temp/
> User ID = Password =
>
> Makiko

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 07 Aug 2007 12:57:57 -0400
To: Gavin Schmidt <gschmidt@giss.nasa.gov>
CC: Jim Hansen <jhansen@giss.nasa.gov>

Gavin,

Thanks for setting me straight - I completely agree with you: any attempts to teach or outsmart Steve are counterproductive and a total waste of time.

As soon as I hear from Jim, I'll send it off - in the mean time, Ken updated the site including July 07 with the new modification. So I'll change the end correspondingly.

Reto

On Tue, 2007-08-07 at 11:44 -0400, Gavin Schmidt wrote:

> I would not engage further than simply dealing with the points at hand - it's just going to further the issue. Thus I would suggest the following text alone (a couple of minor edits and one new line):
>
> =====
>
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> I agree with you that this simple procedure creates an artificial step in those cases where the correction was applied to the newest data, rather than bringing the older data in sync with the latest measurements - which would seem the natural way to go. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round.
>
> Eliminating those artificial steps should have little impact even on the US temperature trend (much less the global trend), but it is a good idea to do so and I'd like to thank you for bringing this to our attention.
>
> Starting with our next update (sometime later this week) an offset based on the last 10 years of overlap in the two data sets will be applied and our on-line documentation will be augmented correspondingly.
>
> I tested the modification with the data now on display:
> The table data (section 3 on the basic temperature site) differed occasionally by a 1 in the last digit (0.01 C). In the display most

sensitive to that change - the US-graph of annual means - the warming decreased by about 0.15 C in the years 2000-2006.

You should perhaps note that your post 'Hansen's Y2K error' should really be titled Reto's Y2K error.

Respectfully,

etc...

======

Gavin

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 07 Aug 2007 13:39:40 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Gavin Schmidt <gschmidt@giss.nasa.gov>

Jim,

Thanks - with your suggested change we totally ignore his blogs and only respond to relevant part of his email, as I should have done in the first place.

I'll show you my current version when you come in.

Reto

On Tue, 2007-08-07 at 13:11 -0400, James Hansen wrote:
> Reto, This is very good, but eliminate the last paragraph re Hansen-error, Reto error, as it looks like I am passing the buck - don't send the e-mail until I come in. Jim
>
> On 8/7/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Gavin,
>
> Thanks for setting me straight - I completely agree with you: any attempts to teach or outsmart Steve are counterproductive and a total waste of time.
>
> As soon as I hear from Jim, I'll send it off - in the mean time, Ken updated the site including July 07 with the new modification. So I'll change the end correspondingly.
>
> Reto
>
> On Tue, 2007-08-07 at 11:44 -0400, Gavin Schmidt wrote:
> > I would not engage further than simply dealing with the points at hand -
> > it's just going to further the issue. Thus I would suggest the following
> > text alone (a couple of minor edits and one new line):
> >
> > =====
> >
> > The basic "GISS Surface Temperature Analysis" page starts with a
> > "Background" section whose first paragraph contains the sentence:
> > "Input data for the analysis ,..., is the unadjusted data of GHCN,
> > except that the USHCN station records were replaced by a later corrected
> > version". A similar statement appears in the "Abstract" and the
> > "Introduction" section of our 2001 paper (JGR Vol 106, pg
> > 23,947-23,948). The Introduction explains the above statement in more

> detail.
>
> When we originally got the USHCN data, they ended in 1999 and as far as I know,
> no major corrections were implemented after that time. Unlike the GHCN
> data, the USHCN data is not a product that is kept current on a regular
> basis. Hence we used (as you noticed) the GHCN data to extend the USHCN
> data.
>
> I agree with you that this simple procedure creates an artificial step
> in those cases where the correction was applied to the newest data,
> rather than bringing the older data in sync with the latest measurements
> - which would seem the natural way to go. Comparing the 1999 data in
> both data sets showed that in about half the cases where the 1999 data
> were changed, the GHCN data were higher than the USHCN data and in the
> other half it was the other way round.
>
> Eliminating those artificial steps should have little impact even
> on the US temperature trend (much less the global trend), but it is a good
> idea to do so and I'd like to thank you for bringing this to our attention.
>
> Starting with our next update (sometime later this week) an offset
> based on the last 10 years of overlap in the two data sets will be
> applied and our on-line documentation will be augmented
> correspondingly.
>
> I tested the modification with the data now on display:
> The table data (section 3 on the basic temperature site) differed
> occasionally by a 1 in the last digit (0.01 C). In the display most
> sensitive to that change - the US-graph of annual means - the warming
> decreased by about 0.15 C in the years 2000-2006.
>
> You should perhaps note that your post 'Hansen's Y2K error' should
> really be titled Reto's Y2K error.
>
> Respectfully,
>
> etc...
>
> ======
>
> Gavin
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 07 Aug 2007 17:32:58 -0400
To: Steve McIntyre <stephen.mcintyre@utoronto.ca>
CC: "James E. Hansen" <jhansen@giss.nasa.gov>, gavin@giss.nasa.gov

Dear Sir,

As to the question about documentation, the basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence:"Input data for the analysis ,...., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

In 2000, USHCN provided us with a file with corrections not contained in the GHCN data. Unlike the GHCN data, that product is not kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend those data in our further updates (2000-present).

I agree with you that this simple procedure creates an artificial step if some new corrections were applied to the newest data, rather than bringing the older data in sync with the latest measurements - as I naively assumed. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round with the plus-corrections slightly outweighing the minus-corrections.

Although trying to eliminate those steps should have little impact on the US temperature trend (much less the global trend), it seems a good idea to do so and I'd like to thank you for bringing this oversight to our attention.

When we did our monthly update this morning, an offset based on the last 10 years of overlap in the two data sets was applied and our on-line documentation was changed correspondingly with an acknowledgment of your contribution. This change and its effect will be noted in our next paper on temperature analysis and in our end-of-year temperature summary.

The effect on global means and all our tables was less than 0.01 C. In the display most sensitive to that change - the US-graph of annual means - the anomalies decreased by about 0.15 C in the years 2000-2006.

Respectfully,

Reto A Ruedy

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.

I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?

In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention, Stephen McIntyre

Subject: Re: draft e-mail
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 07 Sep 2007 18:10:19 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>

Jim,

Just a couple of typos in the "Temperature Analysis Code" section:

2nd paragraph: replace "5 standard deviations are more" by ".. or more"
and in the beginning of the next sentence "I compared the" by "The".

Reto

On Fri, 2007-09-07 at 17:50 -0400, James Hansen wrote:

here is draft e-mail. I am still writing the 'history' introduction to the program listing.

"Peak Oil" Paper Revised and Temperature Analysis Code

To be removed from Jim Hansen's e-mail distribution respond with REMOVE in subject line.

(1) The paper "Implications of 'Peak Oil' for Atmospheric CO2 and Climate", recently revised and resubmitted to Environmental Research Letters, is available at XXXXXXXXXXX.

A principal concern of both referees was our use of a pulse-response function, fit to the Bern carbon cycle model, as opposed to a detailed carbon cycle model. We have clarified limitations of a pulse-response function, but frankly we consider the simplicity and transparency of this approach to be a merit, not a fault. We are concerned mainly with scenarios that have a chance of avoiding "dangerous" CO2 levels, in which case the strong positive feedbacks found in some climate-carbon models are less likely, and in any case such feedbacks only add to the dichotomy between scenarios with declining emissions and "business-as-usual" scenarios.

We have minimized reference to a "dangerous" atmospheric CO2 level to satisfy one of the referees. We retained one reference to our recent papers, which are published in peer-reviewed journals and, we believe, make a strong case that we are already close to a dangerous CO2 level.

The principal conclusion of this paper is that it is possible to keep atmospheric CO2 at a much lower limit than commonly assumed, provided that coal use is phased out except where the CO 2 is captured and stored. This paper provides some of the rationale for the discussion

in "Old King Coal II".

(2) Temperature Analysis Code

Reto Ruedy has organized into a single document as well as practical on a short time scale the programs that produce our global temperature analysis from publicly available data streams of temperature measurements. These are a combination of subroutines written over the past few decades by Sergej Lebedeff, Jay Glascoe, and Reto. Because the programs include a variety of languages and computer unique functions Reto would have preferred to have a week or two to combine these into a simpler more transparent structure, but because of a recent flood of demands for the programs, they are being made available as is. People interested in science may want to wait a week or two for a simplified version.

An introduction to the program description defines the scientific purposes. We have also made a few graphs that may help clarify the significance (or lack thereof) of criticisms in the blogosphere. The one aspect of our procedure where subjectivity could come into play is the choice of which stations are eliminated from the record. This is based on identifying the (small fraction of) stations that raise a red flag (e.g., deviation of 5 standard deviations are more, or a large temporal discontinuity, as defined in our papers). I compared the records of these stations were compared with records of the nearest stations; if these displayed similar features the records were retained. We provide here the list of stations eliminated.

Figure 1 shows maps of the 1880-2006 and 1900-2006 changes of global temperature with and without these stations, and Figure 2 shows the global mean temperature with and without these stations. The effect is practically imperceptible and clearly insignificant.

Another favorite target of those who would raise doubt about the reality of global warming is the lack of quality data from South America and Africa, a legitimate concern. You will note in our maps of temperature change some blotches in South America and Africa, which are probably due to bad data. Our procedure does not throw out data because it looks unrealistic, as that would be subjective. But what is the global significance of these regions of exceptionally poor data? As shown by Figure 1, omission of South America and Africa has only a tiny effect on the global temperature change. Indeed, where it makes a difference it increases the temperature change by (an entirely insignificant) 0.01C.

This is all the time that I intend to give to this subject, but in case you wonder why we subject ourselves to the shenanigans, there are scientific reasons, repeated here from the "history" introduction to the program description.

Subject: Re: Fwd: GISS Raw Data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 09 Aug 2007 11:03:10 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, klo@giss.nasa.gov

Jim,

For our 2001 paper, which includes a discussion of the various USHCN adjustments, we obtained from USHCN their various stages after each adjustment. The first set we obtained in Feb 2000, a slightly corrected version in Dec 2000. Since we did not adapt their filling in scheme and their urban adjustment scheme, we have been using the "SHAP" version obtained in Dec 2000.

>From the USHCN site, anybody can download the TOBS and the FILNET stages, i.e. the one immediately before and the one after "SHAP"; a special request is needed to get SHAP. It seems that these data were extended to 2002 in the mean time.

Is it ok to put our copy of the 12/2000 version of SHAP on our web site or do we need to consult with NOAA before doing so ?

Alternatively, of course, we could go back to using GHCN data only. The effect of that change is described in our 2001 paper as well as on USHCN's website (on http://cdiac.ornl.gov/epubs/ndp/ushcn/ndp019.html#tempdata); it would decrease the 1900-99 US temperature change by .3 C and have negligible effect on any global trends.

Steve will keep asking me for our "software" and I'm tempted to ignore those requests, since our description of what we do with the data completely describes our procedures.

Reto

On Thu, 2007-08-09 at 05:51 -0400, James Hansen wrote:

> Reto, what is the source of data for the present analysis? Is it pratical to provide that? Jim
>
> ---------- Forwarded message ----------
> From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
> Date: Aug 8, 2007 10:46 AM
> Subject: RE: GISS Raw Data
> To: rruedy@giss.nasa.gov
> Cc: "James E. Hansen" <jhansen@giss.nasa.gov>
>
> Dear Dr Ruedy,
>
> Thank you for this information and for the courteous acknowledgement at
> your website. I can now see where your post-2000 data comes from, but I
> remain unable to identify a digital source for your data prior to 2000
> from available information. I have compared GISS raw to all the archived
> USHCN versions and have been unable to find a match for US data. In some

cases, the differences are substantial.

Can you provide me with (1) a URL from which the U.S. data prior to 2000
(in the version that you used) can be downloaded. (2) If this is no longer possible due to the passage of time, could you please provide me
with a copy of the data that you used (or upload it to an area of your FTP site) and also provide its provenance and date of acquisition? Obviously mere print citations are inadequate for this purpose.

I would like to assess the impact of these modifications on the US and
global averages for myself. I would appreciate a copy of the source code
used for these calculations.

Regards, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Tuesday, August 07, 2007 5:33 PM
To: Steve McIntyre
Cc: James E. Hansen; gavin@giss.nasa.gov
Subject: Re: GISS Raw Data

Dear Sir,

As to the question about documentation, the basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence:"Input data for the analysis ,...,
is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears
in the "Abstract" and the "Introduction" section of our 2001 paper (JGR
Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

In 2000, USHCN provided us with a file with corrections not contained in the GHCN data. Unlike the GHCN data, that product is not kept current
on a regular basis. Hence we used (as you noticed) the GHCN data to extend those data in our further updates (2000-present).

I agree with you that this simple procedure creates an artificial step if some new corrections were applied to the newest data, rather than bringing the older data in sync with the latest measurements - as I naively assumed. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data
were higher than the USHCN data and in the other half it was the other way round with the plus-corrections slightly outweighing the minus-corrections.

Although trying to eliminate those steps should have little impact on the US temperature trend (much less the global trend), it seems a good idea to do so and I'd like to thank you for bringing this

oversight
to our attention.

When we did our monthly update this morning, an offset based on the last 10 years of overlap in the two data sets was applied and our on-line documentation was changed correspondingly with an acknowledgment
of your contribution. This change and its effect will be noted in our next paper on temperature analysis and in our end-of-year temperature summary.

The effect on global means and all our tables was less than 0.01 C. In the display most sensitive to that change - the US-graph of annual means
- the anomalies decreased by about 0.15 C in the years 2000-2006.

Respectfully,

Reto A Ruedy

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.
>
> I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?
>
> In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions, including relevant source code. Thank you for your attention,
> Stephen
> McIntyre

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: revisions to annual temps
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 09 Aug 2007 16:45:37 -0400
To: Gavin Schmidt <gschmidt@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, Jim Hansen <jhansen@giss.nasa.gov>

We might add, that none of the figures in our latest (2001) paper on temperatures was affected, since it was written in 2000, and only data up to 1999 were used for the figures in that paper.

As far as further revisions are concerned, we are considering just using GHCN data (which would reduce the 1900-1999 warming over the US by .3 C and have no noticeable effect on global means).

Needless to say, the whole thing is another red herring.

Reto

On Thu, 2007-08-09 at 15:04 -0400, Gavin Schmidt wrote:
> I was going to reply thusly, but let me know if you'd rather I left it to you.
>
> Gavin
>
> ==========
>
> Andy, this hasn't got much to do with me, but briefly, the issue was as follows. USHCN is a dataset just for the US which has included a number of appropriate corrections to the individual stations based on known site moves and changes in when the data was taken (there has been a shift towards taking data in the morning rather than in the afternoon over the decades). This data is not updated that frequently.
>
> The main source of data is GHCN which is a global product, but that does not take into account the USHCN corrections.
>
> The error was made in assuming that recent values of the GHCN and USHCN were the same. It turns out they weren't and so when the USHCN-corrected stations were extended to the present day using GHCN, there were a number of small jumps (of both sign) in the data. The correction that was put in was then to re-align the GHCN and USHCN data using the 1990-1999 data. This made approximately 0.15 deg C difference in the 2000-2006 period for the US mean, but it is negligible in the global mean. The data were reprocessed and the online values now incorporate that fix.
>
> Given the nature of the error, this is purely a US issue (USHCN doesn't apply to the global data) , and as far as I'm aware, no further revisions related to this issue are likely to be forthcoming.
>
> Gavin
>
> On Thu, 2007-08-09 at 14:28, Andrew Revkin wrote:
> > hi,
> >
> > you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.
> >
> > were the revisions published yet, or are they updated in databases alone?

also, are you doing same for global mean temp or is this specific issue related to US?

ANDREW C. REVKIN
The New York Times / Environment
620 Eighth Ave., NY, NY 10018-1405
phone: 212-556-7326 fax: 509 -357-0965
Arctic book: The North Pole Was Here
Amazon book: The Burning Season
Acoustic-roots band Uncle Wade

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: Fwd: Question]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 09 Aug 2007 19:12:08 -0400
To: gavin@giss.nasa.gov

Gavin,

Jim gets many of these kinds of responses - a change whose effect we described as well within the margin of error has become an "astonishing change".

I guess the best thing is to ignore it and - if at all - set matters straight in a place like RealClimate .

Reto

-------- Forwarded Message --------
From: James Hansen <jhansen@giss.nasa.gov>
To: rruedy@giss.nasa.gov, makis@giss.nasa.gov
Subject: Fwd: Question
Date: Thu, 09 Aug 2007 18:13:23 -0400

DomainKey-Signature: a=rsa-sha1; q=dns; c=nofws; s=s1024;
d=yahoo.com;
h=Received:X-YMail-OSG:From:To:Subject:Date:Message-ID:MIME-Version:Content-Type:X-Mailer:Thread-Index:X-MimeOLE:Disposition-Notification-To;
b=ffkH2tg2tl5Z4nC6MwTIbe8N2agSXyOS+Mr4wPMswbQJdfchkU+64OU3se8vtx+Di6KFgNc1dgwzzbp5PDkotaOObRYkc+Usnl/0ugGm7gw8KnFEjITxLy9cc1DAIhnq4sSMIZyOjf00C
;
X-YMail-OSG:
kEot1KsVM111f1VC3lqkqzwt1okpR3HYVAPxQCuUAnoXdfzY1j2A3q7Zk.gU1cYAwj5E.mbIWKbc97AenQB33NLMIg0vLabH2jPKs5nRtcb6PiL2mA--
From: [redacted]@yahoo.com>
To: <James.E.Hansen@nasa.gov>
Subject: Question
Date: Thu, 9 Aug 2007 18:55:53 -0300
X-Mailer: Microsoft Office Outlook 11
Thread-Index: Acfaz/NMEFUhL8W1T7+QO5t4TLtH8Q==

Dr. Hansen,

Below is a link to a posting today that I was hoping you could comment on.

It is dispiriting that questions regarding climate change have been politicized, but I was hoping you could shed some light on this posting.

http://www.dailytech.com/Blogger+finds+Y2K+bug+in+NASA+Climate+Data/article8383.htm

Thank you very much for any clarification you can provide.

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: Re: revisions to annual temps]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 11:49:35 -0400
To: lesgiss@verizon.net
CC: jhansen@giss.nasa.gov

Hi Leslie,

Andy Revkin asked the same question and Jim's answer below says it all in the clearest and most beautiful way.

The blog you attached is a prime example of what gives bloggers a really bad name; somebody with no idea what he is talking about is spouting absolute nonsense, making no distinctions between what is essential (the facts he conveniently omits) and what is pure noise (which he is concentrating on exclusively).

He omits that the global mean time series (which is generally considered the standard measure for global warming) is unaffected

He concentrates on US time series which (US covering less than 2% of the world) is so noisy and has such a large margin of error that no conclusions can be drawn from it at this point; showing the plot of annual means before and after the correction would have made the whole article a joke since the differences are barely visible.

He had to use the device of ranking the years rather than showing the plots to make any point at all. The problem with rankings is that there are large clumps of years which are equal within the margin of error and rankings within these clumps are purely accidental.

He finds it astounding that years 1934 and 1998 reversed ranks, not remembering that the corrections only affected years 2000-2006, hence that there is no possible connection there.

By speaking of warmest year (rather than warmest year in the US time record) he successfully deceived people like Mark Taylor.

Reto

-------- Forwarded Message --------
From: James Hansen <jhansen@giss.nasa.gov>
To: Andrew Revkin <anrevk@nytimes.com>
Cc: gschmidt@giss.nasa.gov, Reto Ruedy <cdrar@giss.nasa.gov>
Subject: Re: revisions to annual temps
Date: Thu, 9 Aug 2007 22:34:43 -0500

Hi Andy,

This seems to be a tempest inside somebody's teapot dome. One of the changes that we made in our analysis in 2001 was to include improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN record, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the

NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down.

The net effect averaged over the U.S. was an error of about 0.15C or less in the post-2000 years, well within the uncertainty bar that we give. The effect on the global mean was of the order of a thousands of a degree, i.e., entirely negligible.

It is unclear why anyone would try to make something out of this, perhaps a light not on upstairs? Or perhaps this is coming from one of the old contrarians? They can't seem to get over the fact that the real world has proven them to be full of malarkey! You would think that they would be ready to crawl under a rock by now!

Jim
(Reto, please correct if there is anything in the above that is not right.)

On 8/9/07, Andrew Revkin <anrevk@nytimes.com> wrote:

> hi,
>
> you probably noticed the mcintyre et al depiction of GISS annual temp estimates for US over time.
>
> were the revisions published yet, or are they updated in databases alone?
>
> also, are you doing same for global mean temp or is this specific issue related to US?
>
> ANDREW C. REVKIN
> The New York Times / Environment
> 620 Eighth Ave., NY, NY 10018-1405
> phone: 212-556-7326 fax: 509 -357-0965
> Arctic book: The North Pole Was Here
> Amazon book: The Burning Season
> Acoustic-roots band Uncle Wade

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fwd: FW: GISS - Truth driven vs agenda driven
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 13:09:56 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>

Jim,

Nothing was thrown out - I made the corresponding graphs.

Reto

On Fri, 2007-08-10 at 11:59 -0500, James Hansen wrote:

> Makiko, Reto,
> I am being beseiged by these (see below). The appropriate response is to show the curves for U.S. and global temperatures before and after (before and after McIntyre's correction). Makiko doubts that this is possible because the earlier result has been "thrown away". We will never live this down if we give such a statement. It must be possible to reconstruct the "before" result. Unfortunately, this needs to be done soon, as there are various writers with deadlines this afternoon. I hope that is possible -- this should have a higher priority that the calculation that we mentioned yesterday.
> Jim
>
> By the way, I think that we should save the results of the analyses at least once per year, so we will have a record of how they change.
>
> ---------- Forwarded message ----------
> From: lesgiss@verizon.net <lesgiss@verizon.net>
> Date: Aug 10, 2007 11:44 AM
> Subject: FW: GISS - Truth driven vs agenda driven
> To: jhansen@giss.nasa.gov, rruedy@giss.nasa.gov, gschmidt@giss.nasa.gov
>
> Original Message:
> ----------
> From: @shaw.ca
> Date: Fri, 10 Aug 2007 09:34:53 -0700
> To: Leslie.M.McCarthy@nasa.gov
> Subject: GISS - Truth driven vs agenda driven
>
> Dear Leslie,
>
> My fellow Canadians have unveiled another Global warming scam - yours!
>
> Now that we know Mr. Hansen used incorrect data or procedures in determining the "hottest years", concluding that the top 5 warmest yeats
> since the 1890s are : 2005, 1998, 2002, 2003, 2006.
>
> Yet, there on your website (http://www.giss.nasa.gov/research/news/20070208/) is the information still
> making what is now known to be a bogus claim.

Yes we are at a tipping point all right. And the truth is spilling all over
your pro-AGW agenda.

Just like Mr. Manns infamous Hockey Stick graph, which was proven fraudulent by the same people who found your glaring errors, another lie
bites the dust. Funny thing is, when they determined Mr. Mann was fudging
things, they found that Mr. Mann's "peer reviewed" work was reviewed but
not put through a rigourous, truth seeking, audit. That led to them forming
climateaudit.org, to apply the audits that are so obviously missing from
the process. And BINGO - Mr. Hansen is unmasked as a zealot.

Now, are you honestly a scientific driven institution, or will you admit to
being an agenda driven one? I await the press conference to announce that
you have had to revise the hottest years list. I await the update to your
website to reflect the new, peer-audited, results. I await the confession
that you made a huge mistake. I await the firing of those who created and
flogged this lie.

Will you do the right thing?

Sincerely

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Y2K correction
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 14:42:27 -0400
To: KrFrench@ngs.org

Hi Kris,

Steve McIntyre, a former mining executive, now a blogger and global warming denier, is blowing a small correction in our procedure of handling US data way out of proportion. The correction has absolutely no impact on the global mean temperature time series, over the US it made a difference of .15 C.

I checked what this correction does to your map and it does change the colors somewhat over parts of the US; the rest of the world is unaffected. Even the change over the US is way within the margin of error (0.5 C). So there is little need to make any changes.

The timing is a bit awkward, though. Sorry for that,

Reto

Subject: [Fwd: Re: Y2K correction]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 15:02:29 -0400
To: jhansen@giss.nasa.gov, makis@giss.nasa.gov

-------- Forwarded Message --------
From: KrFrench@ngs.org
To: rruedy@giss.nasa.gov
Subject: Re: Y2K correction
Date: Fri, 10 Aug 2007 14:45:58 -0400

Hi Reto,

Thanks for the heads up on this and glad we don't have to change anything because it's printed and done. Looks very nice and I'll be sending complimentary copies your way once it is published. We'll keep your email in the file in case we receive letters about this.

Best,
Kris

Kris French
National Geographic Maps
Senior Research Cartographer
1145 17th Street NW
Washington, D.C. 20036
Tel. 202-775-6173 Fax 202-429-5704
email: krfrench@ngs.org

Reto Ruedy <rruedy@giss.nasa.gov>

08/10/2007 02:42 PM
Please respond to
rruedy@giss.nasa.gov

To
KrFrench@ngs.org
cc

Subject
Y2K correction

Hi Kris,

Steve McIntyre, a former mining executive, now a blogger and global warming denier, is blowing a small correction in our procedure of handling US data way out of proportion. The correction has absolutely no impact on the global mean temperature time series, over the US it made a difference of .15 C.

I checked what this correction does to your map and it does change the colors somewhat over parts of the US; the rest of the world is unaffected. Even the change over the US is way within the margin of error (0.5 C). So there is little need to make any changes.

The timing is a bit awkward, though. Sorry for that,

Reto

Subject: Re: Fwd: Re: New Email
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 16:35:40 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>

Makiko,

In the second to the last paragraph a "w" seems to be missing; 'global arming' is bad also, but I think it meant to be global warming.

Reto

On Fri, 2007-08-10 at 16:26 -0400, Makiko Sato wrote:

> Robert,
>
> I sent this to Jim and he said he would read it once more. Do you want to change the links? If I hear from him, I will convert to a pdf and give it to you.
>
> Makiko
>
> Date: Fri, 10 Aug 2007 16:18:16 -0400
> To: "James Hansen" <jhansen@giss.nasa.gov>
> From: Makiko Sato <makis@giss.nasa.gov>
> Subject: Re: New Email
>
> Are the figures too large or too small? If I make them slightly larger, the US one gets onto the 2nd page.
>
> Makiko
>
> At 15:54 2007/08/10, you wrote:
> > o.k., here is the draft e-mail, which needs the figures and links
> > -- I am it is hard to read
> > right now. Jim
> > Content-Type: application/msword; name="LightUpstairs.10Aug2007.doc"
> > Content-Disposition: attachment; filename="LightUpstairs.10Aug2007.doc"
> > X-Attachment-Id: f_f573171w

--
Reto Ruedy <rruedy@giss.nasa.gov>

A Light On Upstairs?

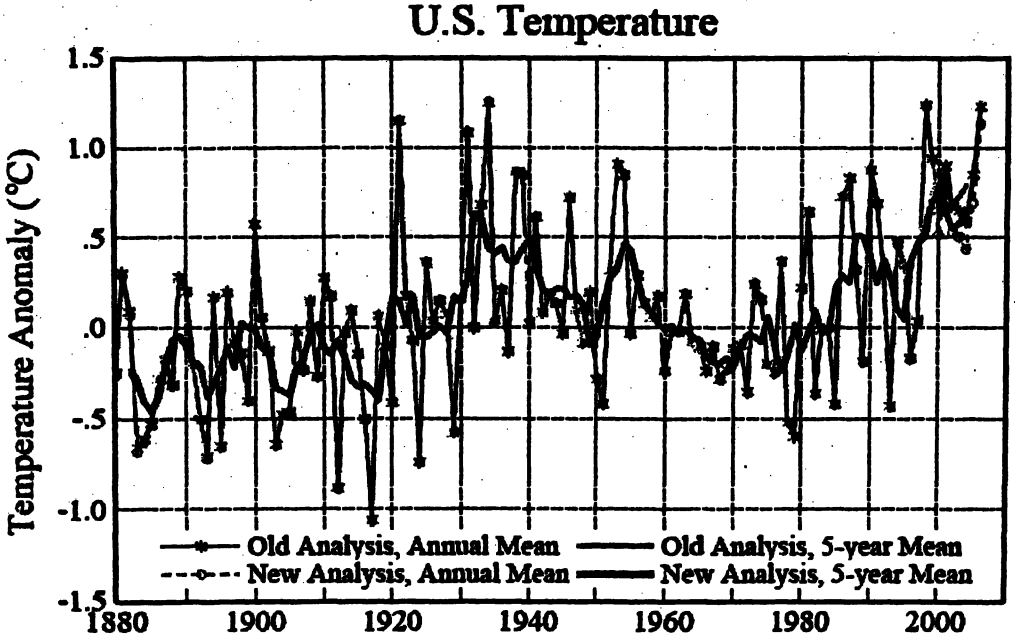
To be removed from Jim Hansen's e-mail list respond to sender with REMOVE as subject

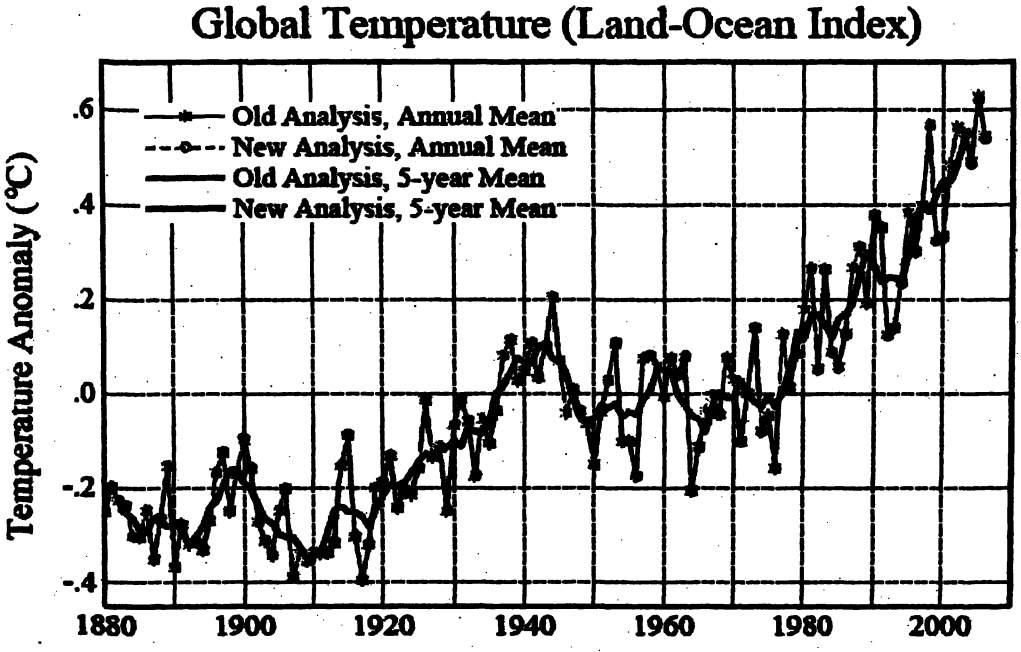
Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis (http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf) had a flaw in the U.S. data. In our most recent update of the analysis method (originally published in our 1981 Science paper – http://pubs.giss.nasa.gov/docs/1981/1981_Hansen_etal.pdf) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations ARE in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in the records at those stations, some up, some down. This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

The flaw did have a noticeable effect on mean U.S. temperature anomalies, as much as 0.15C, as shown in Figure 1 below (for years 2001 and later, and 5 year mean for 1999 and later). The effect on global temperature (Figure 2) was of order one-thousands of a degree, so the corrected and uncorrected curves are indistinguishable.





Somehow this data flaw was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must "step down", or that I must "vanish". Hmm, I am not very good at magic tricks.

I am always a bit puzzled by the views that seem to come from conservative extremes, a bit disconcerting as I come from a moderately conservative state and consider myself a moderate conservative in most ways – puzzling because it seems to me that conservatives should be the first ones standing up for preserving Creation and for the rights of the young and the unborn. After all, that is the basic intergenerational issue in global arming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem.

Jim

Subject: Re: yr 2000 corr.
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 18:16:55 -0400
To: Keith Winstein < @MIT.EDU>

Hi Keith,

We compute these means every month, but since these are annual means, they are copied to the web site only once a year (on February).

So the change that caused all the havoc must have happened after one of the previous routine updates.

Thanks for noticing that,

Reto

On Fri, 2007-08-10 at 17:52 -0400, Keith Winstein wrote:

> Thanks, this is very interesting -- even playing this "which is numerically higher" game (if you will indulge that for a bit more), the correction did not affect the relative ordering of the years. 1934 was at 1.25 before and after the correction, and 1998 was at 1.23 before and after the correction.
>
> Do you have any idea why the "before_correction" data doesn't match the version that Google downloaded on July 23, 2007 from http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt ?
>
> http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp/graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a
>
> In that version, 1934 was at 1.23 and 1998 was at 1.24.
>
> Perhaps the July 23 2007 version had not yet incorporated the June 2007 data? Any insights would be much appreciated.
>
> Thanks, and best regards,
> Keith Winstein
> 617-654-6864
> The Wall Street Journal
>
> On Fri, 10 Aug 2007, Reto Ruedy wrote:
>
> > Hi Keith,
> >
> > Hope you got my data; by the way, the standard deviation of the US series is about .47 C . So the .5C is about 1 standard deviation.
> >
> > We got part of our estimate based on comparing means of model data with applying our method to the same data after removing some of these data similar to what we had available in observations.
> >
> > Reto

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: yr 2000 corr.
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 18:54:19 -0400
To: Keith Winstein < @MIT.EDU>

In our 2001 paper (JGeophysRes vol 106), which we wrote in 2000 without having access to the full year 2000 data, (bottom of pg 23,958)

The annual US mean temperature is slightly warmer in 1934 than in 1998 in the GISS analysis. This contrasts with the USHCN-adjusted data which has 1998 as the warmest year of the century ...

I talked to the person who does the US calculation every year and she still had the old map series saved. With her program I recomputed the means and indeed: 1934: 1.23 1998: 1.24

And the bloggers might have had a download from before January 2007.

Lots of noise about noise.

Reto

On Fri, 2007-08-10 at 18:24 -0400, Keith Winstein wrote:
> Yes, if that's the case, it does seem like this kerfluffle is totally unrelated to the year-2000 correction. (Or at least, even if you had never fixed the bug, the new files posted in February 2008 would have caused a kerfluffle.)
>
> Thank you so much for all your time.
>
> Regards,
> Keith
>
> On Fri, 10 Aug 2007, Reto Ruedy wrote:
>
> > Hi Keith,
> >
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> >
> > So the change that caused all the havoc must have happened after one of the previous routine updates.
> >
> > Thanks for noticing that,
> >
> > Reto
> >
> > On Fri, 2007-08-10 at 17:52 -0400, Keith Winstein wrote:
> > > Thanks, this is very interesting -- even playing this "which is numerically higher" game (if you will indulge that for a bit more), the correction did not affect the relative ordering of the years. 1934 was at 1.25 before and after the correction, and 1998 was at 1.23 before and after the correction.
> > >
> > > Do you have any idea why the "before_correction" data doesn't match the version that Google downloaded on July 23, 2007 from http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt ?
> > >
> > > http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp/graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&c

t=clnk&cd=1&gl=us&client=firefox-a

In _that_ version, 1934 was at 1.23 and 1998 was at 1.24.

Perhaps the July 23 2007 version had not yet incorporated the June 2007 data? Any insights would be much appreciated.

Thanks, and best regards,
Keith Winstein
617-654-6864
The Wall Street Journal

On Fri, 10 Aug 2007, Reto Ruedy wrote:

> Hi Keith,
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> Hope you got my data; by the way, the standard deviation of the US series is about .47 C . So the .5C is about 1 standard deviation.
>
> We got part of our estimate based on comparing means of model data with applying our method to the same data after removing some of these data similar to what we had available in observations.
>
> Reto

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: Re: yr 2000 corr.]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 10 Aug 2007 19:02:21 -0400
To: lnolan@giss.nasa.gov

Hi Leslie,

I talked to this person on the phone - he said he writes for the Wall Street Journal.

Reto

-------- Forwarded Message --------\

From: Keith Winstein < @MIT.EDU>
To: Reto Ruedy <rruedy@giss.nasa.gov>
Cc: Keith Winstein < @MIT.EDU>
Subject: Re: yr 2000 corr.
Date: Fri, 10 Aug 2007 18:24:07 -0400 (EDT)

Yes, if that's the case, it does seem like this kerfluffle is totally unrelated to the year-2000 correction. (Or at least, even if you had never fixed the bug, the new files posted in February 2008 would have caused a kerfluffle.)

Thank you so much for all your time.

Regards,
Keith

On Fri, 10 Aug 2007, Reto Ruedy wrote:

> Hi Keith,
>
> We compute these means every month, but since these are annual means, they are copied to the web site only once a year (on February).
>
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> >
> > http://64.233.169.104/search?q=cache:vskwzroreeQJ:data.giss.nasa.gov/gistemp/graphs/Fig.D.txt+http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a
> >
> > In _that_ version, 1934 was at 1.23 and 1998 was at 1.24.

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> > We got part of our estimate based on comparing means of model data with applying our method to the same data after removing some of these data similar to what we had available in observations.
> >
> > Reto
>
> --
> Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fig A2
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Sun, 12 Aug 2007 11:28:12 -0400
To: gs210@columbia.edu
CC: jhansen@giss.nasa.gov, makis@giss.nasa.gov, rschmunk@giss.nasa.gov

Gavin,

It took me a while to solve the mystery of small differences between plots and tables, since both products are created from the same binary data set. Here is the solution:

My program produces the tables (txt files) with nint(100*data) and the plot files with "write F9.3" from the same data.

Makiko then rounds the plot file from 3 to 2 digits (F9.2) which is reasonable given the margin of error. Had I used F12.6, the number of differences would be almost zero, had I used F9.2 there would be no differences.

I used F9.3 because occasionally I was asked whether a small change was increased or decreased by roundoff - but I'll gladly change to F9.2 for future updates.

What I think would be more beneficial is to add (as we do in 1 isolated instance) an estimated margin of error to all our tables and plots, indicating how much we trust these numbers. It is a little complicated by the fact that they are a function of time, but giving one number for the early period and a second number for the last few decades should be sufficient.

I also think it would pay to take a look at the "graphs" section, drop or add some displays, and add to each display a small text indicating what we can (or cannot) learn from it, why one would be interested in it. Right now, it looks to me more like a random selection of graphs with a few maps thrown in for good measure.

Reto

On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:

> Reto, there are small (0.01) difference between the current
> Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt.
> Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these
> be reconciled to prevent any further confusion. I know it's small,
> but people are now looking very carefully. Thanks
>
> Gavin

Subject: Re: Fwd: US temperature correction graphic and file
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Sun, 12 Aug 2007 12:06:10 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: gavin@giss.nasa.gov

It's probably not worth mentioning that some of the differences are due to the fact that the original map was created on January 12, 2007, when some December 2006 and earlier data may not have been reported yet.

Your display shows the effect of the correction only, hence may differ a little from 's. I'm bracing myself against accusations of white wash attempts.

Reto

On Sun, 2007-08-12 at 09:54 -0500, James Hansen wrote:

---------- Forwarded message ----------
From: berkeley.edu>
Date: Aug 12, 2007 6:56 AM
Subject: US temperature correction graphic and file
To: Gavin Schmidt <gschmidt@giss.nasa.gov>, Stephen McIntyre <smcintyre: i>, @itworks.com>, !gmail.com>, James Hansen <jhansen@giss.nasa.gov>

In light of the recent fuss over the significance of the correction to the United States temperature record, I tracked down a copy of the data as it existed on August 1 st (from MSN's search engine cache) and made a direct comparison (something that was largely lacking in much of the coverage of this issue).

I am distributing the comparison numbers and a graphic made from them to many of the principle commentators on this issue. Feel free to use and redistribute this at will, though I would appreciate an acknowledgment if you do so.

http://www.globalwarmingart.com/

Subject: Re: Fig A2
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 13 Aug 2007 09:49:26 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: gs210@columbia.edu, jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov

Makiko,

I'm so sorry if I gave you the impression I hated the graphs section. >From now on I will make any suggestions for alterations in person rather than in writing - obviously my tendency to be brief may lead to grotesque misunderstandings. I know and understand the history of that page. In my last unfortunate sentence, I should have been more explicit and replaced "Right now, it looks to me" by "Trying to look at it with the eyes of a lay person who sees it for the first time (which I was doing at the time, but I should know that you can't mindread) it appears to me".

Again, my sincerest apologies,

Reto

On Sun, 2007-08-12 at 17:37 -0400, Makiko Sato wrote:

> I also think it would pay to take a look at the "graphs" section, drop or add some displays, and add to each display a small text indicating what we can (or cannot) learn from it, why one would be interested in it. Right now, it looks to me more like a random selection of graphs with a few maps thrown in for good measure.
>
> Reto

Reto,

When I took over from Jay when he left (Jay displayed what Jim told him to, based on our 1999 temperature paper), the graph section had only five graphs.

Fig. A, global mean, annual mean using meteorological stations (Fig. 4 of the paper)
Fig. B, northern, low, southern latitude annual means (Fig. 5 of the paper)
Fig. C, global mean, monthly means (Fig. 8 of the paper)
Fig. D, U.S. mean, annual means (Fig. 6 of the paper)
Fig. E, global and low latitude means, seasonal means (Fig. 7 of the paper)

I added

Fig. A2 (land-ocean index) because Jim switched more to land-ocean than the station data, and now this is our standard, and I don't think we should remove this.
hemispheric means, I put it because somebody I forgot (outsider) requested, and I thought it may not be a bad idea, but if you don't like this, I can remove.
set of recent months maps because Jim is quite interested in these, but since I have my own temperature page, I can remove this, if you want to.

And then the top one with a linegraph and three maps. As I mentioned earlier, some people like this, including Jim. But if you hate this,

> I can remove it also.
>
> Makiko

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fwd: US temperature correction graphic and file
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 13 Aug 2007 11:30:24 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, gavin@giss.nasa.gov, klo@giss.nasa.gov

Jim,

I did make those calculations (I assume you mean using only GHCN and hand-adjusting only St.Helena and Lihue, in both cases decreasing the trend, eliminating a 1C and .8C step, resp., as stated in our 1999 paper, also using our urban adjustment).

I only held them back because bringing in a new analysis at this time would confuse the situation beyond hope.

As far as the global means are concerned, the effect of our cleaning is slightly negative for the pre-1950 period, slightly positive thereafter, the biggest deviations are -.01C in 1922, +.01C in 2006; the change in the 1900-1999 (lin. trend) is .01C/century (i.e. without the cleaning it would decrease by .01C).

The US trend however is a different story though not surprising: In addition to the change caused by the USHCN modifications (+.30C for the 1900-1999 change, as noted in our 2001 paper: +.14 TOBS, +.16 station hist.adj), the other modifications added .08C/century to the trend. So the trend would decrease by .38C.

The deviations for the individual years caused by the cleaning range from -.13 in 1922 to +.37 in 2006. The optical impression this creates when you look at the table of data is totally misleading: the 1998 anomaly just happens to fall below 1C (.93C) whereas 1921,1931,1934 are above 1C (1.27,1.20,1.37C) !

Reto

On Sun, 2007-08-12 at 12:02 -0500, James Hansen wrote:

> Yes, the brouhaha is surely not over. So it is important to do the calculation that we discussed the last time we met. Jim
>
> On 8/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>
> > It's probably not worth mentioning that some of the differences are due
> > to the fact that the original map was created on January 12, 2007, when
> > some December 2006 and earlier data may not have been reported yet.
> >
> > Your display shows the effect of the correction only, hence may differ a
> > little from 's. I'm bracing myself against accusations of white
> > wash attempts.
> >
> > Reto
> >
> > On Sun, 2007-08-12 at 09:54 -0500, James Hansen wrote:
> > >
> > >

> ---------- Forwarded message ----------
> From: @berkeley.edu>
> Date: Aug 12, 2007 6:56 AM
> Subject: US temperature correction graphic and file
> To: Gavin Schmidt <gschmidt@giss.nasa.gov>, Stephen McIntyre
> <smcintyre; ca>, @itworks.com>,
> [@gmail.com>, James Hansen <jhansen@giss.nasa.gov>
>
> In light of the recent fuss over the significance of the correction to
> the United States temperature record, I tracked down a copy of the
> data as it existed on August 1 st (from MSN's search engine cache) and
> made a direct comparison (something that was largely lacking in much
> of the coverage of this issue).
>
>
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> http://www.globalwarmingart.com/
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: blogs
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 13 Aug 2007 16:27:38 -0400
To: "lesgiss@verizon.net" <lesgiss@verizon.net>

Who is the person asking about the Mark Steyn blog ? The whole article is total hogwash, as most right-wing blog on climate change are. Don't use Jim's Revkin response without his permission.

Please give me a call (212-678-5600).
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fig A2
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 13 Aug 2007 17:29:43 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: gs210@columbia.edu, jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov, klo@giss.nasa.gov

Makiko,

As you pointed out to me, if I keep 4 decimal places rather than 3, rounding to 2 digits will no longer be different than rounding directly to 2 digits (and I still have the 3rd digit if needed). So I will use 4 digits for internal purposes in the future.

Reto

On Sun, 2007-08-12 at 18:53 -0400, Makiko Sato wrote:

> OK, I updated all versions of Fig.A and Fig.A2 with newest data with 3 digits after decimal, and manually typed in the table numbers to match Reto's tables. Since I did manually, there may be some mistakes. If you find some, please let me know.
>
> Makiko
>
> On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:
>
> > Reto, there are small (0.01) difference between the current Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt. Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these be reconciled to prevent any further confusion. I know it's small, but people are now looking very carefully. Thanks
> >
> > Gavin

Subject: Re: FW: <no subject>
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 14 Aug 2007 12:13:32 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: makis@giss.nasa.gov

Jim,

There are 2 fine points, none of them of any importance, that might cause some extra problems:

1 - The USHCN file we got in 12/2000 only contained data up to and including 1999; hence the correction also affected year 2000.

2 - I adjusted the old data (1880-1999) to fit the newer data (2000-current) as we did with St.Helena and Lihue, rather than the other way round. I could easily change that, but that would again change all station data and I think it would be unwise to do so at this point.

Reto

On Tue, 2007-08-14 at 02:52 -0400, James Hansen wrote:

> Don,
>
> These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.
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moves, time-of-observation bias, etc. However, the only available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and it has been so corrected.

On 8/13/07, Donald Anderson <donald.anderson-1@nasa.gov> wrote:

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC, 20546-0001
202-358-1432 Fax: x2770
email: Donald.Anderson-1@nasa.gov

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From: "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" <donald.anderson-1@nasa.gov>, "Maring, Hal (HQ-DK000)" <hal.maring@nasa.gov>
Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
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Don et al.,

I saw this on the NASA news summary today.

> Columnist Notes Changes In NASA's Temperature Data.
> In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.
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> The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century ◆ 2000, 2002, 2003, 2004

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every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings ◆ albeit without the fanfare that accompanied

the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi Master

------ End of Forwarded Message

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fwd: FW: <no subject>
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 14 Aug 2007 13:58:59 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: "DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:" <dmclean8@bloomberg.net>, Makiko Sato <makis@giss.nasa.gov>

Jim,

The US plots and figures are not part of the standard analysis; once a year (in January) we create them in a separate step.

In the last posting visible to the public (done in Jan 2001) of the US annual temperature plot 1998 was indeed a little warmer than 1934. In order to notice that, you had to go to the plot and click on table data. As far as I know, nobody at GISS noticed that fact or gave it a second thought.

The next update was due in Jan 2008. Had we updated this figure every month, then due to late US station reports, at some point that ranking would have changed back to 1934 "beating" 1998. My guess is that it would have been in February for the following reason:

Ken downloads the GHCN data repeatedly until he sees some US stations included - they always seem to come in a day or 2 later than most other data. As you know, particularly in January there is pressure to do the update as soon as possible; so it is very likely that his final download in January did not include all US stations yet.

I of course wanted to see the impact of the correction only, hence I did the same analysis for the latest data with and without the correction. In both cases, as you reported, US-1934 was slightly warmer than US-1998.

Hope that clears it all up.

Reto

On Tue, 2007-08-14 at 13:27 -0400, James Hansen wrote:

> Makiko, Reto, could you please clear this up. Other people keep saying the same thing that Demian does, i.e., that we previously claimed that 1998 was warmer than 1934. Is that right? I am quite sure that our 2001 paper shows 1934 slightly warmer, as we still find. Of course, scientifically this is all nonsense, as the difference of 0.02 is much less than the accuracy, so practically it should be stated as a tie. I know that whenever new stations are added to the record it can change things by small amounts. Did we once find 1998 as warmer??? Jim (I will be away from e-mail for a few hours).
>
> On 8/14/07, DEMIAN MCLEAN, BLOOMBERG/ NEWSROOM:
> <dmclean8@bloomberg.net> wrote:
>
> > Thanks, James. I'm not familiar with that paper from 2001. Is it not true,
> > though, that NASA's rankings, as available at:
> >
> > http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt
> >
> > now show 1934 as the hottest year, where 1998 used to hold that position?

thanks,
demian
----- Original Message -----
From: James Hansen <jhansen@giss.nasa.gov>
At: 8/14 13:00:38

Demian,

No, we have not changed ranking of warmest year in the U.S. As you will see
in our 2001 paper we found 1934 slightly warmer, by an insignificant hair
over, 1998. We still find that result. The flaw affected temperatures only
after 2000, not 1998 and 1934.

Yes, our analysis algorithm is available, described fully in publication,
and other researchers have taken that description, applied it to the raw
data and come up with the same results that we get.

Jim

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> respond to
> the second question, regarding your algorithm and making it public.
>
> best,
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> From: James Hansen <jhansen@giss.nasa.gov>
> At: 8/14 12:15:10
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> Date: Aug 14, 2007 2:52 AM
> Subject: Re: FW: <no subject>
> To: Donald Anderson <donald.anderson-1@nasa.gov>, Jack Kaye
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> Cc: Leslie McCarthy <lnolan@giss.nasa.gov>
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> > *From: *"Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov>
> > *Date: *Mon, 13 Aug 2007 12:01:06 -0400
> > *To: *"Anderson, Donald (HQ-DK000)" <
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hill. I presume that my note "A Light on Upstairs?" should have clarified
things for scientists (Leslie, you can send it to anybody), but perhaps a
few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically
updates our global temperature analysis each month. The flaw affected only
2000 and later, and only the United States.

The flaw, even when present (in 2000-2006, in the U.S.) was minor, at most a
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U.S., with 1934 the warmest in our record and 1998 practically tied with
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warmest in our record then, and it is now, with and without the programming
flaw. We also point out in that paper that the differences among these
different years are negligible, less than the uncertainty.

Finally, if one wished to be scientific, instead of trying to confuse the
public, as is the obvious intend of these critics/contrarians, one should
note that single year temperatures for an area as small as the U.S. (2% of
the globe) are extremely noisy. If one instead looks at the temperature

averaged over several years, it is apparent that the U.S. as well as the
world has been quite warm in the past decade. Indeed, averaged over several
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0.8Cwarmer than at the beginning of the 20th century, similar to the
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Jim

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included Tom Karl's adjustments to USHCN station records, which they based
on metadata available station by station for station moves,
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included these stations after 2000 was the GHCN (WMO), which did not include
the Karl adjustments, a fact not recognized by our program, thus causing a
discontinuity in these station records. Because the effect was small, we
did not notice it. This programming flaw is easily corrected, and it has
been corrected.

On 8/13/07, Donald Anderson
<donald.anderson-1@nasa.gov > wrote:
>
> Jim:
> FYI
> Any comment?
> Don
>
> _____
> Don Anderson
> 3G84
> Modeling, Analysis and Prediction (MAP)
> Earth Science Division
> Science Mission Directorate
> NASA HQ
> Washington, DC, 20546-0001
> 202-358-1432 Fax: x2770
> email: Donald.Anderson-1@nasa.gov
>
>
> ------ Forwarded Message
> *From: *"Volz, Stephen M. (HQ-DK000)" <
svolz@nasa.gov>
> *Date: *Mon, 13 Aug 2007 12:01:06 -0400
> *To: *"Anderson, Donald (HQ-DK000)" <
donald.anderson-1@nasa.gov >,
> "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov >
> *Cc: *"Kaye, Jack A. (HQ-DK000)" <
jack.a.kaye@nasa.gov>, "Brown, Dwayne C.
> (HQ-NB060)" < dwayne.c.brown@nasa.gov>
> *Conversation: *<no subject>
> *Subject: *<no subject>

>
> Don et al.,
>
> I saw this on the NASA news summary today.
>
> *
> Columnist Notes Changes In NASA's Temperature Data.
**In an op-ed for
> the Washington Times (8/13, 87K) Mark Steyn, a
syndicated columnist who is
> also senior contributing editor for Hollinger Inc.
Publications, senior
> North American columnist for Britain's Telegraph
Group, North American
> editor for the Spectator, writes, " Something rather
odd happened the other
> day. If you go to NASA's Web site and look at the "
U.S. surface air
> temperature" rankings for the Lower 48 states, you
might notice something
> has changed.
>
> Then again, you might not. They're not issuing any
press releases about
> it. But they have quietly revised their All-Time Hit
Parade for U.S.
> temperatures.
>
> The "hottest year on record" is no longer 1998, but
1934. Another alleged
> swelterer, the year 2001, has now dropped out of the
Top 10 altogether, and
> most of the rest of the 21st century - 2000, 2002,
2003, 2004 - plummeted
> even lower down the Hot 100. In fact, every
supposedly hot year from the
> '90s and Oughts has had its temperature rating
reduced. Four of America's
> Top 10 hottest years turn out to be from the 1930s,
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> when we all drove around in huge SUVs with the
air-conditioning on
> full-blast. If climate change is, as Al Gore says,
the most important issue
> anyone's ever faced in the history of anything ever,
then Franklin Roosevelt
> didn't have a word to say about it. And yet we
survived.
>
> So why is 1998 no longer America's record-breaker?
Because a very diligent
> fellow called Steve McIntyre of climateaudit.com
labored long and hard to
> prove there was a bug in NASA's handling of the raw
data. He then notified
> the scientists responsible, and received an
acknowledgment that the mistake
> was an "oversight" that would be corrected in the
next "data refresh." The
> reply was almost as cool as the revised chart
listings.
>
> Who is this man who understands American climate

data so much better than
> the National Aeronautics and Space Administration?
Well, he's not even
> America: He's Canadian. Just another immigrant doing
the jobs Americans
> won't do, even when they're federal public servants
with unlimited budgets?
> No. Mr. McIntyre lives in Toronto. But the data
smelled wrong to him, he
> found the error, and NASA has now corrected its
findings - albeit without
> the fanfare that accompanied the
hottest-year-on-record hysteria of almost a
> decade ago. Sunlight may be the best disinfectant,
but, when it comes to
> global warming, the experts prefer to stick the
thermometer where the sun
> don't shine."
> *
>
>
> And he goes on and on....
>
> Does anyone know what this guy is talking about? I
checked the NASA
> website
>
http://www.nasa.gov/centers/goddard/news/topstory
/2006/2006_warm.html,dated
Feb 8, 2007 and it shows the top five years as: 2005
(1st), 1998,
> 2002, 2003, and 2006.
>
> Stephen Volz, Ph.D.
> Program Executive, Science Mission Directorate
> Suite 3B74
> NASA Headquarters
>
> "Try not. Do, or do not. There is no try."
> - Yoda, Jedi Master
>
>
> ------ End of Forwarded Message
>

Demian, I am running to a meeting and may not get back in time for your deadline -- following may help answer your question -- presumably you saw my "Upstairs" note? Jim Hansen

---------- Forwarded message ----------
From: James Hansen <jhansen@giss.nasa.gov >
Date: Aug 14, 2007 2:52 AM
Subject: Re: FW: <no subject>
To: Donald Anderson <donald.anderson-1@nasa.gov>, Jack Kaye <jack.a.kaye@nasa.gov>
Cc: Leslie McCarthy <lnolan@giss.nasa.gov>

Don,

These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note

"A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2000 and later, and only the United States.

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Jim

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> FYI
> Any comment?
> Don
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Earth Science Division
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NASA HQ
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From: "Volz, Stephen M. (HQ-DK000)" <svolz@nasa.gov>
Date: Mon, 13 Aug 2007 12:01:06 -0400
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Cc: "Kaye, Jack A. (HQ-DK000)" <jack.a.kaye@nasa.gov>, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.
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>
> plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove

around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings ◆ albeit

without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive, Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."
- Yoda, Jedi
Master

------ End of Forwarded Message

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FW: Media request (Brazil)
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 10:26:43 -0400
To: lesgiss@verizon.net

Leslie,

I'll talk to anybody who wants further information. This is one area I feel confident about. My phone: 212-678-5600

Reto

On Wed, 2007-08-15 at 10:05 -0400, lesgiss@verizon.net wrote:

> another one? any takers?
>
> How do you want to handle these requests today/the balance of the week????
>
> Please let me know.
>
> HQ PAO is asking whether you will be posting a clarification on the data changes. She reports that the webmaster indicated there was a lot of "interest" in this issue. Perhaps the paragraphs that Jim is writing for Jack Kaye/Don Anderson could be used as is or adapted? Please let me know ASAP so I can advise HQ..
>
> Thanks.
>
> Leslie
>
> Original Message:
> ----------
> From: Letícia Francisco Sorg - Redação Época - Editora Globo
> lsorg@edglobo.com.br
> Date: Wed, 15 Aug 2007 10:58:28 -0300
> To: lnolan@giss.nasa.gov
> Subject: Media request (Brazil)
>
> Dear Leslie Nolan,
>
> I am a journalist from ÉPOCA, a weekly magazine in Brazil, and I would like to interview one spokesperson of Nasa about the changes in the data concerning average temperatures in the United States - which have changed the warmest year from 1998 to 1934.
>
> I would like to talk to Mr. James Hansen but I have the idea of how he is busy and how my deadline is short (today, in fact).
> Then I would like to ask you for another researcher related to this issue.
> I have only one main question and it would be great to have Nasa's official position towards it:
> - What is the meaning of the correction for global warming theory?
>
> I hope you can help me with this simple request.
> Thank you very much,
>
> I look forward to hearing from yoiu soon,
>
> Best regards,
>
> Letícia
> Letícia Sorg

Subject: NASA/GISS temperatures
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 11:53:00 -0400
To: lsorg@edglobo.com.br

Dear Leticia,

Some bloggers, misguided by their eagerness to report anything that could be used to debunk the "myth of global warming", mixed 2 unrelated stories (really: non-stories) together.

Story 1: Due to missing reports, instrumentation changes, recalibrations etc. temperature reports are imprecise, the estimated margin of error of annual US mean temperatures is about .1-.2C. We posted these temperatures in January and then again in July. During these 6 months, some late reports and corrected reports had been incorporated resulting in occasional changes of up to .02C (5-10 times smaller than the margin of error). Accidentally, these changes caused the #1 and #2 years which differ by .02C in both postings to change places.

The unexciting truth is that nobody ever knew or will ever know whether 1934 or 1998 was warmer in the US. Actually, 4 more years could really be number 1, given the margin of error. It's a race with 6 winners.

Story 2: A flaw was detected in the procedure that combined station data from 2 sources. This error only affected years 2000-2006; after correcting the flaw, US-temperatures decreased by .15C in these years - since this is just about equal to the margin of error, fortunately for me who made the error, the correction had no significant effect. The corrections affected the global means by .003C; since the margin of error for global means is .02C, we round to the nearest hundredth of a degree and the table of global means was unaffected.

I am sorry if that disappoints you.

Sincerely,

Dr. Reto A. Ruedy

PS. the flaw in story 2 is about equivalent to taking your temperature orally every day and then suddenly switching to a rectal thermometer and using the data without taking into account that the latter data are slightly higher. The correction I made was the equivalent to take both temperatures at the same time, then adjusting either all the oral or all the rectal temperatures accordingly to get a consistent series.

Hope that clears things up

Reto

Subject: Re: Interview - ÉPOCA magazine (Brazil)
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 11:55:13 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

Dear Leticia,

Just quick: Our emails crossed. Maybe my note answered all questions; if not I will write you again after carefully reading your mail.

Reto

On Wed, 2007-08-15 at 12:06 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Reto Ruedy,
>
> I am a journalist from ÉPOCA, a Brazilian weekly magazine, and I am getting in contact to you following Mrs. Leslie McCarthy indication.
>
> I am working on an article about the data correction made by Nasa at U.S. temperature tables and I would like to clarify some few points about this issue.
>
> - What is the meaning of this correction? It is being said that it could raise questions about the trustability of the studies realeased about global warming. What is Nasa's official position towards it?
>
> - Does Nasa intend to go public to explain more about the data correction?
>
> - Is the global warming theory in risk because of this correction?
>
> - Do you believe that this correction could be used for political purposes?
>
> Dr. Reto, I am sending the questions to you via e-mail because I think it would be easier for you to answer (considering that my deadline is today) but I can call you if you prefer.
>
> Thank you very much,
>
> I look forward to hearing from you soon,
>
> Best regards,
>
> Letícia
> Letícia Sorg
> Assistant Editor - ÉPOCA magazine
> revistaepoca.globo.com
>) 55 (11) 3767-7084 (office)
>)
> 1 lsorg@edglobo.com.br

engano, por favor envie uma mensagem ao remetente, deletando-o em seguida. Quaisquer opiniões ou informações expressadas neste e-mail pertencem ao seu remetente e não necessariamente coincidem com aquelas da Editora Globo.

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Interview - ÉPOCA magazine (Brazil)
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 12:33:06 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

On Wed, 2007-08-15 at 12:06 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

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>
> - What is the meaning of this correction? It is being said that it could raise questions about the trustability of the studies realeased about global warming. What is Nasa's official position towards it?

We are a modeling group and the projections about global change are based on physics and chemistry, using models and observations of the changing composition of the atmosphere, not observations of the resulting temperatures; those can only be used after the fact as confirmation or contradiction of the theory.

The same people who think a .02C difference in US temperatures is sensational complain in most of their reports how unreliable these very measurements are. So in their view, the margin of error should be even greater than our estimated .1-.2C and I personally agree with them that it is probably closer to .3-.4C. Unfortunately, they don't realize that if this is true, then a .02C change is of absolutely no importance, just a sampling error.

> - Does Nasa intend to go public to explain more about the data correction?

I explained in the leading background section on our main temperature web site what the error was at the same time as I exchanged the figures and tables. I even mentioned by name the lay person who alerted us to the possibility of a programming error. Since the corrections were within the margin of error, nothing further seemed to be required.

Later, Dr. Hansen wrote a more explicit statement and we put a link to that statement on our web site.

> - Is the global warming theory in risk because of this correction?

No. Warnings about potential global warming have been voiced in Dr. Hansen's papers in the early 1980's when he was basically the only climatologist to do so, and the data that were gathered in the mean time only showed that he had, if anything, underestimated the consequences of our computations: we really can't afford to delay any action because of the misinformations of some people who know nothing except how to work the press.

> - Do you believe that this correction could be used for political purposes?

Everything can be used and is used for political purposes in particular

if it concerns mathematical/scientific questions; because education in these fields is so poor in the US, that people who do know better can get away totally ridiculous statements (like a change in the temperatures 2000-2006 has anything to do with a change in 1934 !).

> Dr. Reto, I am sending the questions to you via e-mail because I think it would be easier for you to answer (considering that my deadline is today) but I can call you if you prefer.
>
> Thank you very much,
>
> I look forward to hearing from you soon,
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>) 55 (11) 3767-7084 (office)
>)
> 1 lsorg@edglobo.com.br

Please let me know if you have any more specific questions.

Thanks for contacting us,

Reto

> As informações contidas nesse e-mail e documentos anexos são dirigidas exclusivamente o(s) destinatário(s) acima indicados, podendo ser confidenciais, particulares ou privilegiadas. Qualquer tipo de utilização dessas informações por pessoas não autorizadas está sujeito às penalidades legais. Caso você tenha recebido esse e-mail por engano, por favor envie uma mensagem ao remetente, deletando-o em seguida. Quaisquer opiniões ou informações expressadas neste e-mail pertencem ao seu remetente e não necessariamente coincidem com aquelas da Editora Globo.

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: RES: Interview - ÉPOCA magazine (Brazil)
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 12:57:54 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

On Wed, 2007-08-15 at 13:18 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Reto,
>
> I have just read your e-mail and I think that it is really clear about the implications (or lack of them) of this correction.
> But I would like to ask you just two specific points, that I think that are still interesting even with your explanation:
> 1) Do the Nasa intend to go public to clarify this case and provide media and society with an official statement?

Yes - what NASA would like to do is to use the media attention as an opportunity to educate the public about a truly serious situation. Exactly how they will do so - given the tiny size of the molehill that was blown up to enormous proportions - I don't know.

When in our January US table 1998 and 1934 changed places (in all our previous tables and publications US-1934 slightly beat US-1998) nobody noticed or cared about that change, much less made any kind of official statement. So why should we have to do it now ?

Small programming errors are made and corrected all the time; the one I made in 2000 was not the only one (like all other programmers, I make many mistakes every day - debugging usually finds them, but errors that have only small effects can survive for years).

> 2) Other question raised by this case is about the differences among American temperature stations and the used in other countries. It's being said that American stations are mostly at rural areas, which suffered less temperature variation than the cities. Is it correct?

One criticism that some people brought up was that weather stations near growing cities show rising temperature since the urbanization contributes a warming that would not be felt further away from the urban center.

This question was taken seriously, analyzed, it's effect compared to the margin of error and found to be of similar size to the margin of error. Nevertheless, we use an adjustment that makes the time series of urban stations behave exactly like the mean of the neighboring rural stations. If an urban station does not have neighboring rural stations, we do not use its data.

In spite of all this effort, the global warming deniers cling steadfastly to that effect.

Our analysis treats all stations the same way independent in which country they are located.

Reto

> Thank you very much, once more,
> Best regards,
> Letícia

exclusivamente o(s) destinatário(s) acima indicados, podendo ser confidenciais, particulares ou privilegiadas. Qualquer tipo de utilização dessas informações por pessoas não autorizadas está sujeito às penalidades legais. Caso você tenha recebido esse e-mail por engano, por favor envie uma mensagem ao remetente, deletando-o em seguida. Quaisquer opiniões ou informações expressadas neste e-mail pertencem ao seu remetente e não necessariamente coincidem com aquelas da Editora Globo.

--
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--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: U.S. warmest years
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 14:08:09 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

Dear Leticia,

I agree with your revised table; I don't know where your previous table comes from (I'll look into that).

To answer your question, given the existing sampling error (.1-.2C):

No - we cannot draw any conclusions about our planet from the US data (much less from the rankings you show below):

The US has been warming in the period 1980-2006 similarly to the period from 1920-1934; that earlier 15-year period then was followed by a cooling period and the same might be true for the current 25-year period. The annual US-mean changes are still large compared to any CO2 effect.

However, the global means show a totally different picture (global mean year-to-year changes being much smaller than US-mean year-to-year changes); and whereas no scientist, as far as I know, could make a convincing argument for an extended warming period in the US in 1920-1934, our 1982 model runs showed that the effect of CO2 should become noticeable in the global means within the next 2-4 decades. And sadly, the global (not the US) data now available showed that model was, if anything, underestimating the effect.

Sincerely,

Reto

On Wed, 2007-08-15 at 14:03 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Ruedy,
>
> I would like to thank you very much for you attention and precise information.
> The last point I would like to ask you is concerning the ranking of the warmest years in U.S.
> I have organized the data from the previous and the correct table of temperatures and I got to this ranking:
>
> Previous table
> 1°
> 1934
> 1°
> 1998
> 2°
> 1921
> 3°
> 1931
> 4°
> 2005
> 5°
> 1999

6°
2001
7°
1953
8°
1990
9°
1987

Revised table
1°
1934
2°
1998
3°
1921
4°
2006
5°
1931
6°
1999
7°
1953
8°
1990
9°
1938
10°
1939

As I've pointed in red, two years from 30's entered in the ranking of 10 warmest years in U.S.. Considering this change, would it be possible to say that the planet is becoming hotter and hotter?

Thank you once more,
Best regards,
Letícia

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Previous table
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 14:33:00 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

Ok, I see, this is the table made one and a half years ago in January 2006, where the 2005 data still had a lot of reports missing.

We updated that in January 2007 and planned to do the next update in January 2008.

I recomputed the table with and without correcting the famous flaw; the table with the corrections is on the web. The other table was never on the web, so most people compare the new table to the Jan 2007 version.

Using the newest data and the old flawed program, the ranking would have been:

1934,1998,2006,1921,1931, 1999,1953,2001,1990,1938

i.e. only 2006 and 2001 dropped a little, the other affected years were not among the first 10.

The corresponding curves may be found on

http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf

Reto

On Wed, 2007-08-15 at 15:10 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Deard Dr. Ruedy, here it's the previous table I used for the comparison. If you could check if I'm using a correct base, it would be great.
> Thank you
> Letícia
>
> Contiguous 48 U.S. Surface Air Temperature Anomaly (C)
> ---
> year Annual_Mean 5-year_Mean
> DADOS ORIGINAIS
> ---
> 1880 -.41 .13
> 1881 .15 -.14
> 1882 -.04 -.34
> 1883 -.70 -.36
> 1884 -.73 -.44
> 1885 -.50 -.48
> 1886 -.25 -.39
> 1887 -.21 -.19
> 1888 -.28 -.05
> 1889 .28 -.04
> 1890 .23 -.10
> 1891 -.24 -.17
> 1892 -.47 -.21
> 1893 -.66 -.39
> 1894 .11 -.31
> 1895 -.69 -.24
> 1896 .17 -.14
> 1897 -.12 -.25
> 1898 -.17 .00

1899	-.43	-.02
1900	.54	-.01
1901	.07	-.11
1902	-.09	-.11
1903	-.65	-.31
1904	-.41	-.34
1905	-.47	-.37
1906	-.06	-.21
1907	-.22	-.18
1908	.11	-.02
1909	-.25	.01
1910	.31	-.12
1911	.11	-.17
1912	-.89	-.11
1913	-.13	-.21
1914	.03	-.33
1915	-.16	-.36
1916	-.51	-.32
1917	-1.00	-.36
1918	.02	-.42
1919	-.15	-.10
1920	-.45	.12
1921	1.08	.10
1922	.11	-.01
1923	-.09	.15
1924	-.70	-.05
1925	.38	-.04
1926	.04	-.01
1927	.16	.02
1928	.05	-.03
1929	-.54	.16
1930	.11	.12
1931	1.00	.24
1932	-.01	.60
1933	.66	.58
1934	1.24	.42
1935	.05	.40
1936	.18	.43
1937	-.12	.34
1938	.78	.34
1939	.80	.41
1940	.04	.45
1941	.54	.32
1942	.07	.18
1943	.16	.17
1944	.09	.20
1945	-.01	.20
1946	.67	.15
1947	.09	.17
1948	-.08	.13
1949	.18	-.08
1950	-.23	-.04
1951	-.38	.15
1952	.30	.28
1953	.88	.31
1954	.82	.44
1955	-.05	.41
1956	.28	.25
1957	.14	.12
1958	.07	.09
1959	.16	.03
1960	-.22	.00
1961	.00	.02

1962	-.02	-.03
1963	.19	.00
1964	-.08	-.05
1965	-.12	-.07
1966	-.24	-.16
1967	-.10	-.19
1968	-.27	-.19
1969	-.23	-.16
1970	-.12	-.22
1971	-.10	-.11
1972	-.36	-.04
1973	.25	-.05
1974	.15	-.08
1975	-.20	.07
1976	-.23	-.09
1977	.36	-.23
1978	-.51	-.15
1979	-.58	.03
1980	.22	-.12
1981	.65	-.01
1982	-.36	.10
1983	.01	-.02
1984	.01	-.01
1985	-.41	.23
1986	.73	.30
1987	.84	.26
1988	.33	.52
1989	-.17	.51
1990	.88	.41
1991	.69	.26
1992	.31	.38
1993	-.43	.28
1994	.47	.10
1995	.35	.05
1996	-.18	.38
1997	.05	.48
1998	1.24	.54
1999	.94	.55
2000	.65	.88
2001	.89	.76
2002	.67	.68
2003	.65	.75
2004	.54	*
2005	.99	*

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: RES: U.S. warmest years
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 14:56:02 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

Dear Leticia,

This is even more speculative, some people still try to deny in spite of the data that it is warming at all. To observe that the warming accelerates would take even longer observation times, another 50-100 years.

It would be bad enough if it keeps increasing at the current rate of .2C/decade as it has since 1980. It briefly increased at almost that rate in the 1915-1945 period but then it stayed even or even decreased a little til about 1980. The period from 1880-1920 was a period of basically constant global temperatures.

Again, the frightening thing about today's temperature rise is that it was predicted 25 years ago based on solid physics. So chances are it will not stop until we deal with the cause of it ! The good thing is that we know the cause, and we could use that knowledge if people just paid attention to the experts rather than to the bloggers.

Reto

On Wed, 2007-08-15 at 15:15 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Ruedy,
>
> Thank you very much for your explanation. But could we say that the temperature increasing rate is getting bigger in the last decades? It's being publicized that the the global temperatures are increasing at a rate of 0,2°C per decade in the last to decades, compared to a rate of less than 0,1 °C per decade in the beginning of the 20th Century.
> Is this correct?
> Thank you,
> Sincerely
>
> -----Mensagem original-----
> De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Enviada em: quarta-feira, 15 de agosto de 2007 15:08
> Para: Letícia Francisco Sorg - Redação Época - Editora Globo
> Assunto: Re: U.S. warmest years
>
> Dear Leticia,
>
> I agree with your revised table; I don't know where your previous table comes from (I'll look into that).
>
> To answer your question, given the existing sampling error (.1-.2C):
>
> No - we cannot draw any conclusions about our planet from the US data (much less from the rankings you show below):
>
> The US has been warming in the period 1980-2006 similarly to the period from 1920-1934; that earlier 15-year period then was followed by a cooling period and the same might be true for the current 25-year period. The annual US-mean changes are still large compared to any CO2 effect.

However, the global means show a totally different picture (global mean year-to-year changes being much smaller than US-mean year-to-year changes); and whereas no scientist, as far as I know, could make a convincing argument for an extended warming period in the US in 1920-1934, our 1982 model runs showed that the effect of CO2 should become noticeable in the global means within the next 2-4 decades. And sadly, the global (not the US) data now available showed that model was, if anything, underestimating the effect.

Sincerely,

Reto

On Wed, 2007-08-15 at 14:03 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Ruedy,
>
> I would like to thank you very much for you attention and precise information.
> The last point I would like to ask you is concerning the ranking of the warmest years in U.S.
> I have organized the data from the previous and the correct table of temperatures and I got to this ranking:
>
> Previous table
> 1°
> 1934
> 1°
> 1998
> 2°
> 1921
> 3°
> 1931
> 4°
> 2005
> 5°
> 1999
> 6°
> 2001
> 7°
> 1953
> 8°
> 1990
> 9°
> 1987
>
> Revised table
> 1°
> 1934
> 2°
> 1998
> 3°
> 1921
> 4°
> 2006
> 5°
> 1931
> 6°
> 1999

7°
1953
8°
1990
9°
1938
10°
1939

As I've pointed in red, two years from 30's entered in the ranking of 10 warmest years in U.S.. Considering this change, would it be possible to say that the planet is becoming hotter and hotter?

Thank you once more,
Best regards,
Letícia

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FW: Per our Discussion - Note for Web Site
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:07:29 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, Makiko Sato <makis@giss.nasa.gov>

I'm not quite happy with the formulation. I'm working on a revision...

1st sentence is ok

2nd and 3rd need work

rest is ok, more in a minute...

Reto

On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:

This seems fine to me. Reto or Makiko may want to comment. Jim

On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

Hi Jim:

This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and
submitted to Jack Kaye....is this okay with you?

Thanks.

Leslie

Original Message:

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 14:24:47 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: FW: Per our Discussion - Note for Web Site

How does this look to you?

> _____
> From: Thompson, Tabatha (HQ-NB000)
> Sent: Wednesday, August 15, 2007 11:57 AM
> To: Kaye, Jack A. (HQ-DK000)
> Subject: Per our Discussion - Note for Web Site
>
> Jack,
> Per our discussion, please review the following statement. Once I hear
> from you, I'll send it to our web people.
> ttt
> Researchers at NASA's Goddard Institute for Space Studies in New York
> recently revised information on their global temperature record based
> on corrected data. The computer modeling program that generated the
> temperature record was produced with the assumption that

data from
> monitoring stations would be adjusted to account for changes such as
> the time of day at which measurements were made. However, the adjusted
> data were not always readily available and the program used data from
> monitoring stations that had not been adjusted. The result was a
> discontinuity in temperature variance in 2000. The researchers have
> corrected the computer program and posted their revised data. More
> information is available here: (LINK TO GISS SITE).
>
>

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FW: Per our Discussion - Note for Web Site
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:24:29 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, Makiko Sato <makis@giss.nasa.gov>

Here is my suggested revision:

Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record based on corrected data. The program that replaced for some US stations the 1880-1999 record by records that were adjusted for instrumentation and procedural changes, used the original source for the later years without modifying them to fit the adjusted data. The result was a discontinuity in year 2000 for the US stations involved. Since the necessary adjustment was positive for about half the stations and negative for the other half, the effect on US means was a discontinuity of +.15C, and of .003C for the global mean series. The researchers ...

Reto

On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:

> This seems fine to me. Reto or Makiko may want to comment. Jim
>
> On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> Hi Jim:
>
> This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and
> submitted to Jack Kaye....is this okay with you?
>
> Thanks.
>
> Leslie
>
> Original Message:
> ----------
> From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> Date: Wed, 15 Aug 2007 14:24:47 -0400
> To: leslie.m.mccarthy@nasa.gov
> Subject: FW: Per our Discussion - Note for Web Site
>
> How does this look to you?
>
> > _____
> > From: Thompson, Tabatha (HQ-NB000)
> > Sent: Wednesday, August 15, 2007 11:57 AM
> > To: Kaye, Jack A. (HQ-DK000)
> > Subject: Per our Discussion - Note for Web Site
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> > Jack,
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> corrected the computer program and posted their revised data. More
> information is available here: (LINK TO GISS SITE).
>
>

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: RES: RES: U.S. warmest years
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:39:02 -0400
To: Letícia Francisco Sorg - Redação Época - Editora Globo <lsorg@edglobo.com.br>

I am a mathematician responsible for the software used for the NASA/GISS climate modeling effort and data analysis. You may abbreviate this any way you want.

I don't envy your task of making an interesting story out of mostly "hot air".

Thanks for your patience and understanding,

Reto

On Wed, 2007-08-15 at 16:21 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Mr. Ruedy,
> I would like to thank you once more the personal attention you have given to my magazine.
> It will be great to have your opinions on the article.
> I would like just to check with you how I can present you at the article. Nasa's scientist responsible for software?
> Thank you very much
> Best regards
> Letícia
>
> -----Mensagem original-----
> De: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Enviada em: quarta-feira, 15 de agosto de 2007 15:56
> Para: Letícia Francisco Sorg - Redação Época - Editora Globo
> Assunto: Re: RES: U.S. warmest years
>
> Dear Leticia,
>
> This is even more speculative, some people still try to deny in spite of the data that it is warming at all. To observe that the warming accelerates would take even longer observation times, another 50-100 years.
>
> It would be bad enough if it keeps increasing at the current rate of .2C/decade as it has since 1980. It briefly increased at almost that rate in the 1915-1945 period but then it stayed even or even decreased a little til about 1980. The period from 1880-1920 was a period of basically constant global temperatures.
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> Again, the frightening thing about today's temperature rise is that it was predicted 25 years ago based on solid physics. So chances are it will not stop until we deal with the cause of it ! The good thing is that we know the cause, and we could use that knowledge if people just paid attention to the experts rather than to the bloggers.
>
> Reto
>
> On Wed, 2007-08-15 at 15:15 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:
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> > Dear Dr. Ruedy,

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However, the global means show a totally different picture (global mean year-to-year changes being much smaller than US-mean year-to-year changes); and whereas no scientist, as far as I know, could make a convincing argument for an extended warming period in the US in 1920-1934, our 1982 model runs showed that the effect of CO2 should become noticeable in the global means within the next 2-4 decades. And sadly, the global (not the US) data now available showed that model was, if anything, underestimating the effect.

Sincerely,

Reto

On Wed, 2007-08-15 at 14:03 -0300, Letícia Francisco Sorg - Redação Época - Editora Globo wrote:

> Dear Dr. Ruedy,
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> I would like to thank you very much for you attention and precise information.
> The last point I would like to ask you is concerning the ranking of the warmest years in U.S.
> I have organized the data from the previous and the correct table of temperatures and I got to this ranking:
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> 1°

1998
2°
1921
3°
1931
4°
2005
5°
1999
6°
2001
7°
1953
8°
1990
9°
1987

Revised table
1°
1934
2°
1998
3°
1921
4°
2006
5°
1931
6°
1999
7°
1953
8°
1990
9°
1938
10°
1939

As I've pointed in red, two years from 30's entered in the ranking of 10 warmest years in U.S.. Considering this change, would it be possible to say that the planet is becoming hotter and hotter?

Thank you once more,
Best regards,
Letícia

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fig A2
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:45:01 -0400
To: gs210@columbia.edu
CC: Makiko Sato <makis@giss.nasa.gov>

Good catch; for internal purposes, more than half the data is enough in all cases; but for the web products, we definitely have to change that as long as any part of the missing data is in the future.

I'll change the programs correspondingly for the next update. This time, we'll have to do it manually.

Reto

On Wed, 2007-08-15 at 15:00 -0400, gs210@columbia.edu wrote:
> One final quibble. In Fig A2, we now have the 5 year mean value for 2005 - which implies that 2007 data is being used in the calculation. But since 2007 isn't complete, that number will change by the end of the year. It might be cleaner not to calculate the that last value since it uses information that isn't seen (yet) in the annual average numbers.
>
> Gavin
>
> Quoting Reto Ruedy <rruedy@giss.nasa.gov>:
>
> > Makiko,
> >
> > As you pointed out to me, if I keep 4 decimal places rat er than 3,
> > rounding to 2 digits will no longer be different than r unding directly
> > to 2 digits (and I still have the 3rd digit if needed). So I will use 4
> > digits for internal purposes in the future.
> >
> > Reto
> >
> > On Sun, 2007-08-12 at 18:53 -0400, Makiko Sato wrote:
> > > OK, I updated all versions of Fig.A and Fig.A2 with newest data with
> > > 3 digits after decimal, and manually typed in the table numbers to
> > > match Reto's tables. Since I did manually, there may be some
> > > mistakes. If you find some, please let me know.
> > >
> > > Makiko
> > >
> > >
> > > > On Sat, 2007-08-11 at 10:26 -0400, gs210@columbia.edu wrote:
> > > > > Reto, there are small (0.01) difference between the current
> > > > > Fig.A2.txt and the appropriate column in GLB.Ts+dSST.txt.
> > > > > Similarly, between Fig.A.txt and GLB.Ts.txt - I suggest that these
> > > > > > be reconciled to prevent any further confusion. I know it's

small,

but people are now looking very carefully. Thanks

Gavin

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FW: Per our Discussion - Note for Web Site
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 15:47:35 -0400
To: lesgiss@verizon.net
CC: jhansen@giss.nasa.gov, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov

There must have been an ESP connection between Jack and me ...

Reto

On Wed, 2007-08-15 at 15:42 -0400, lesgiss@verizon.net wrote:

> Thanks, Reto.
>
> I spoke with Tabatha again..she said Jack Kaye suggested adding the details that the changes were to US stations only, and only post-2000...
>
> Jim--if Reto's revisions, and Jack's are okay, please let me know.
>
> Leslie
> Original Message:
> ----------
> From: Reto Ruedy rruedy@giss.nasa.gov
> Date: Wed, 15 Aug 2007 15:24:29 -0400
> To: jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site
>
> Here is my suggested revision:
>
> Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record based on corrected data. The program that replaced for some US stations the 1880-1999 record by records that were adjusted for instrumentation and procedural changes, used the original source for the later years without modifying them to fit the adjusted data. The result was a discontinuity in year 2000 for the US stations involved. Since the necessary adjustment was positive for about half the stations and negative for the other half, the effect on US means was a discontinuity of +.15C, and of .003C for the global mean series. The researchers ...
>
> Reto
>
> On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:
>
> > This seems fine to me. Reto or Makiko may want to comment. Jim
> >
> > On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> >
> > Hi Jim:
> >
> > This is the draft statement prepared by Tabatha Thompson, of HQ PAO, and
> > submitted to Jack Kaye....is this okay with you?
> >
> > Thanks.
> >
> > Leslie
> >
> > Original Message:
> > ----------

From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
Date: Wed, 15 Aug 2007 14:24:47 -0400
To: leslie.m.mccarthy@nasa.gov
Subject: FW: Per our Discussion - Note for Web Site

How does this look to you?

> _____
> From: Thompson, Tabatha (HQ-NB000)
> Sent: Wednesday, August 15, 2007 11:57 AM
> To: Kaye, Jack A. (HQ-DK000)
> Subject: Per our Discussion - Note for Web Site
>
> Jack,
> Per our discussion, please review the following statement. Once I hear
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> recently revised information on their global temperature record based
> on corrected data. The computer modeling program that generated the
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> data were not always readily available and the program used data from
> monitoring stations that had not been adjusted. The result was a
> discontinuity in temperature variance in 2000. The researchers have
> corrected the computer program and posted their revised data. More
> information is available here: (LINK TO GISS SITE).
>
>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: FW: Per our Discussion - Note for Web Site
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 17:46:00 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov

It becomes clearer if we split that sentence into 2 sentences:

The flawed program replaced for some US stations the 1880-1999 record by records adjusted for instrumentation and procedural changes as it was supposed to. However, it used the original source for the years after 1999 without modifying them to fit the adjusted data.

Sorry for the long complicated sentence,
! Hope that makes it better.

Reto

On Wed, 2007-08-15 at 16:42 -0400, James Hansen wrote:

there must be something wrong with the second sentence -- please reread it Reto. Jim

On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

Thanks, Reto.

I spoke with Tabatha again..she said Jack Kaye suggested adding the details
that the changes were to US stations only, and only post-2000...

Jim--if Reto's revisions, and Jack's are okay, please let me know.

Leslie
Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Wed, 15 Aug 2007 15:24:29 -0400
To: jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov
Subject: Re: FW: Per our Discussion - Note for Web Site

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modifying them to fit the adjusted data. The result was a discontinuity

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However,
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> > monitoring stations that had not been adjusted.
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> > discontinuity in temperature variance in 2000. The
> researchers have
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> data. More
> > information is available here: (LINK TO GISS
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> mail2web - Check your email from the web at
> http://link.mail2web.com/mail2web
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>
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Reto Ruedy <rruedy@giss.nasa.gov>

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mail2web.com - What can On Demand Business Solutions do for
you?
http://link.mail2web.com/Business/SharePoint

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 17:51:20 -0400
To: jhansen@giss.nasa.gov
CC: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

Not sure about punctuation, but I added a "," before "as it was supposed to" - seems to improve legibility.

Reto

-------- Forwarded Message --------
From: Reto Ruedy <rruedy@giss.nasa.gov>
Reply-To: rruedy@giss.nasa.gov
To: James Hansen <jhansen@giss.nasa.gov>
Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov
Subject: Re: FW: Per our Discussion - Note for Web Site
Date: Wed, 15 Aug 2007 17:46:00 -0400

It becomes clearer if we split that sentence into 2 sentences:

The flawed program replaced for some US stations the 1880-1999 record by records adjusted for instrumentation and procedural changes, as it was supposed to. However, it used the original source for the years after 1999 without modifying them to fit the adjusted data. The result was ...

Sorry for the long complicated sentence,
! Hope that makes it better.

Reto

On Wed, 2007-08-15 at 16:42 -0400, James Hansen wrote:
> there must be something wrong with the second sentence -- please reread it Reto. Jim
>
> On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> Thanks, Reto.
>
> I spoke with Tabatha again..she said Jack Kaye suggested adding the details
> that the changes were to US stations only, and only post-2000...
>
> Jim--if Reto's revisions, and Jack's are okay, please let me know.
>
> Leslie
> Original Message:
> ----------
> From: Reto Ruedy rruedy@giss.nasa.gov
> Date: Wed, 15 Aug 2007 15:24:29 -0400
> To: jhansen@giss.nasa.gov, lesgiss@verizon.net, ltravis@giss.nasa.gov,
> robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site

Here is my suggested revision:

Researchers at NASA's Goddard Institute for Space Studies in New York
recently revised information on their global temperature record based on
corrected data. The program that replaced for some US stations the
1880-1999 record by records that were adjusted for instrumentation and
procedural changes, used the original source for the later years without
modifying them to fit the adjusted data. The result was a discontinuity
in year 2000 for the US stations involved. Since the necessary
adjustment was positive for about half the stations and negative for the
other half, the effect on US means was a discontinuity of +.15C, and
of .003C for the global mean series. The researchers ...

Reto

On Wed, 2007-08-15 at 14:42 -0400, James Hansen wrote:
> This seems fine to me. Reto or Makiko may want to comment. Jim
>
> On 8/15/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> Hi Jim:
>
> This is the draft statement prepared by Tabatha Thompson, of
> HQ PAO, and
> submitted to Jack Kaye....is this okay with you?
>
> Thanks.
>
> Leslie
>
>
> Original Message:
> ----------
> From: Thompson, Tabatha (HQ-NB000) Tabatha.Thompson-1@nasa.gov
> Date: Wed, 15 Aug 2007 14:24:47 -0400
> To: leslie.m.mccarthy@nasa.gov
> Subject: FW: Per our Discussion - Note for Web Site
>
>
> How does this look to you?
>
> > _____
> > From: Thompson, Tabatha (HQ-NB000)
> > Sent: Wednesday, August 15, 2007 11:57 AM
> > To: Kaye, Jack A. (HQ-DK000)
> > Subject: Per our Discussion - Note for Web Site
> >
> > Jack,
> > Per our discussion, please review the following statement.
> Once I hear
> > from you, I'll send it to our web people.

> > ttt
> > Researchers at NASA's Goddard Institute for Space Studies in
> > New York
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> > on corrected data. The computer modeling program that
> > generated the
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>

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Reto Ruedy <rruedy@giss.nasa.gov>

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 15 Aug 2007 19:00:04 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov

This sounds much better but I think we should add:

"for the period 1880-1999"

at the end of the 1st sentence

and

"when the adjusted data ended"

at the end of the 2nd sentence or something like that.

Reto

On Wed, 2007-08-15 at 18:45 -0400, James Hansen wrote:

> Here is my suggestion:
>
> The flawed program appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, the program reverted to unadjusted data for subsequent years. The result was...
>
> Jim
> On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>
> > Not sure about punctuation, but I added a "," before "as it was supposed
> > to" - seems to improve legibility.
> >
> > Reto
> >
> > -------- Forwarded Message --------
> > From: Reto Ruedy <rruedy@giss.nasa.gov>
> > Reply-To: rruedy@giss.nasa.gov
> > To: James Hansen <jhansen@giss.nasa.gov>
> > Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note for Web Site
> > Date: Wed, 15 Aug 2007 17:46:00 -0400
> >
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> > > Thanks.
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> > > To: leslie.m.mccarthy@nasa.gov
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> > mail2web - Check your email from the web
at
> > http://link.mail2web.com/mail2web
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> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
>

> mail2web.com - What can On Demand Business Solutions
do for
> you?
> http://link.mail2web.com/Business/SharePoint
>
>
>
>

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Re: Real Deal
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 08:46:56 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>

In the middle of page 2, "Untied States?" should be changed to "United States?"

Reto

On Thu, 2007-08-16 at 04:12 -0400, James Hansen wrote:

> On 8/16/07, James Hansen <jhansen@giss.nasa.gov> wrote:
> Makiko, thanks, there are about half a dozen urls that I should give, for the primary references, perhaps you could find some of those - although I assume that I can just copy those from the GISS web page. Jim
>
> On 8/15/07, Makiko Sato <makis@giss.nasa.gov > wrote:
> Jim,
>
> There are some more.
>
> (1) The biggest error I made was that I didn't notice that you had
> exchanged Fig. 2 and 3.
>
> Others are minor.
> (2) Do you want to give the url
> http://www.columbia.edu/~jeh1/distro LightUpstairs 70810.pdf
> after "the e-mail sent last week" in the 3rd paragraph?
>
> (3) Do you really mean "micrometer" not magnifying glass? I thought
> a micrometer measures thickness of a paper or something, but I am not
> sure.
>
> (4) "relative hot" or "relatively hot"?
>
> (5) ")" miising after "Dangerous" at the end of a paragraph.
>
> Send me more before I may be able to read it
>
> Makiko
>
> On 8/15/07, Makiko Sato <makis@giss.nasa.gov> wrote:
> >
> > >Date: Wed, 15 Aug 2007 18:51:56 -0400
> > >To: "James Hansen" <jhansen@giss.nasa.gov>
> > >From: Makiko Sato <makis@giss.nasa.gov>
> > >Subject: Re: Real Deal

> >
> >I moved some paragraphs so that figures come either at top or bottom
> >of pages, but I may have missed some lines, so please check
> >carefully. I can change figure sizes easily.
> >
> >Makiko
> >
> >
> >At 18:36 2007/08/15, you wrote:
> >>Makiko, if you put the figures into this version, and if I can
> >>still edit the text, then that should work well. I still have a
> >>few paragraphs to write at the end. Jim
> >>Content-Type: application/msword; name=RealDeal2.doc
> >>X-Attachment-Id: f_f5eeiiji
> >>Content-Disposition: attachment; filename="RealDeal2.doc"
>
>

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Reto Ruedy <rruedy@giss.nasa.gov>

The Real Deal: Usufruct & the Gorilla

Fox, Washington Times, and their like have gone bananas over a flaw discovered in the computer program that produces global temperatures at GISS each month. They have even managed to get Congress and NASA Headquarters involved. Now we know what mom meant when she said "don't make a federal case out of it". Hey, what is really going on here?

The said computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001) http://pubs.giss.nasa.gov/docs/2001/2001_Hansen_etal.pdf The flaw affected temperatures only in the United States (by about 0.15°C) and only in 2000 and later. We corrected the flaw in the program, thanked the fellow who pointed it out, and thought that was the end of it.

[The correction: As explained in the e-mail sent last week, http://www.columbia.edu/~jeh1/distro_LightUpstairs_70810.pdf one improvement made in our 2001 analysis was to use USHCN (U.S. Historical Climatology Network) station records in the U.S. as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day of temperature measurements, etc. Our computer program presumed that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program instead picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

What we have here is a case of dogged contrarians who present results in ways intended to deceive the public into believing that the changes have greater significance than reality. They aim to make a mountain out of a mole hill. I believe that these people are not stupid, instead they

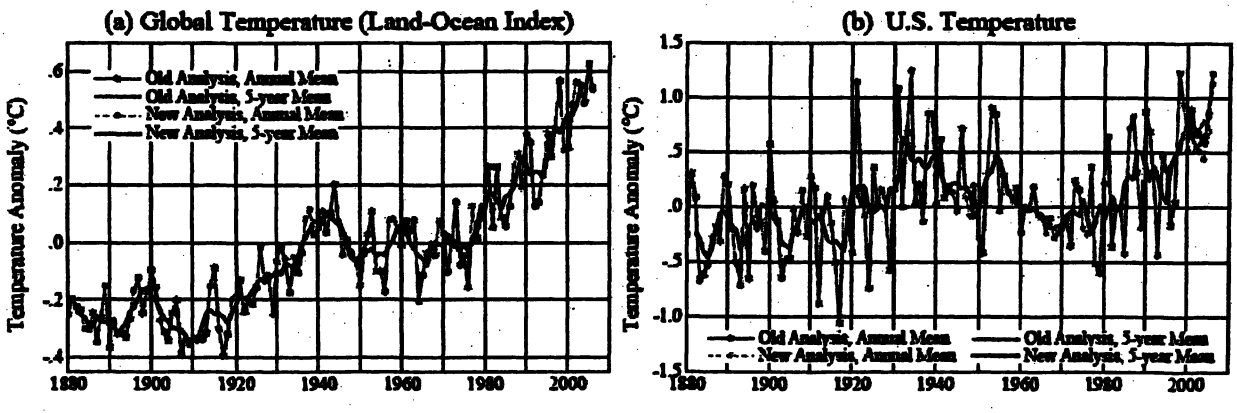

Figure 1. Global (a) and U.S. (b) before and after correction of flaw in computer program.

seek to create a brouhaha and muddy the waters in the climate change story. They seem to know exactly what they are doing and believe they can get away with it, because the public does not have the time, inclination, and training to discern what is a significant change with regard to the global warming issue.

The proclamations of the contrarians are a deceit, but their story raises a more important matter, usufruct. It is the most important issue in the entire global warming story, in my opinion. The players in the present U.S. temperature story, we scientists included, are just bit players. The characters in the main drama are big fish, really big fish. But before we get to that matter, I need to expose how the deceit works.

Instead of showing the impact of the flaw in our analysis program via a graph such as Figure 1, as a scientist would do (and as would immediately reveal how significant the flaw was), they instead discuss ranking of temperature in different years, including many false statements. We have thus been besieged by journalists saying "they say that correcting your error caused the warmest year to become 1934 rather than a recent year, is that right!?"

Hardly. First of all, many journalists had the impression that they were talking about global temperature. As you can see from Figure 1a, global warming is unaffected by the flaw. This realization should be enough to make most journalists lose interest, as global warming refers to global temperature.

But what if you are a chauvinist and only care about temperature in the United States? Did correcting the flaw in the program change the time of calculated maximum temperature to 1934? No. If you look at our 2001 paper, and get out your micrometer, you will see that we found 1934 to be the warmest year in the United States, by a hair, of the order of 0.01°C warmer than 1998, the same as the result that we find now. Of course the difference in the 1934 and 1998 temperatures is not significant, and we made clear in our paper that such years have to be declared as being practically a dead-heat.

Indeed, when we receive new data each month, which often adds in new stations, or modifies the results at a small number of stations, the results for a given year can fluctuate as much as a few hundredths of a degree. Also the GISS ranking of years is commonly different than that obtained from the NOAA or British analyses. This is expected, as there are significant differences in the methods. For example, the urban warming that we estimate (and remove) is larger than that used by the other groups (as discussed in 2001 Hansen et al. reference above).

Let's look (Figure 2) at the temperature anomalies in the four years that yield the warmest U.S. in our analysis. The U.S. mean temperature anomalies that we obtain range from 1.25°C in 1934 to 1.13°C in 2006. Thus the total range among these four years is just over a tenth of a degree. The uncertainty in the U.S. temperature is at least that large (see our published papers), so we can only say that these four years were comparably warm and the warmest year was probably either 1934 or 1998.

Note, however, that the 1998 and 2006 temperature anomaly maps differ fundamentally from the 1934 and 1921 temperature maps. In 1998 and 2006 the world as a whole has become warmer, 1998 being aided by a very strong El Nino, but 2006 by only a very weak El Nino. In 1921 and 1934 the United States happened to be a relatively hot spot compared to the world as a whole. The next time that the U.S. temperature happens to be unusually high relative to the globe, it may be quite a barn burner.

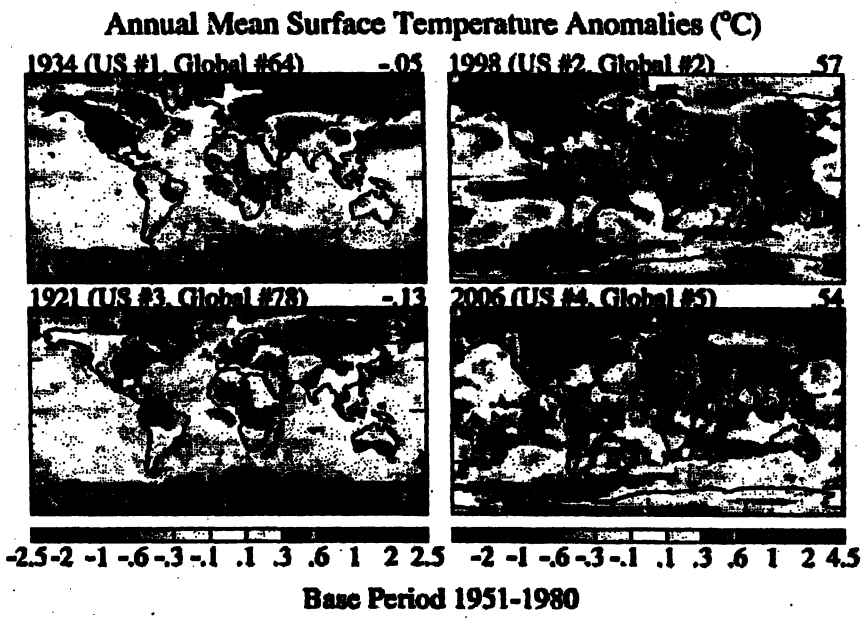

Figure 2. Temperature anomalies, relative to 1951-1980 base period, in the four years that are the warmest in the contiguous U.S. in the GISS analysis.

Although the media is always very interested in the ranking of individual years, the precise ranking is not only difficult to define accurately, it is also less important than the climate change averaged over several years. Figure 3 shows surface temperature anomalies of the past 10 years relative to both a 1880-1920 base period and the usual 1951-1980 base period. The figure also shows these results both with and without the flaw in our temperature analysis.

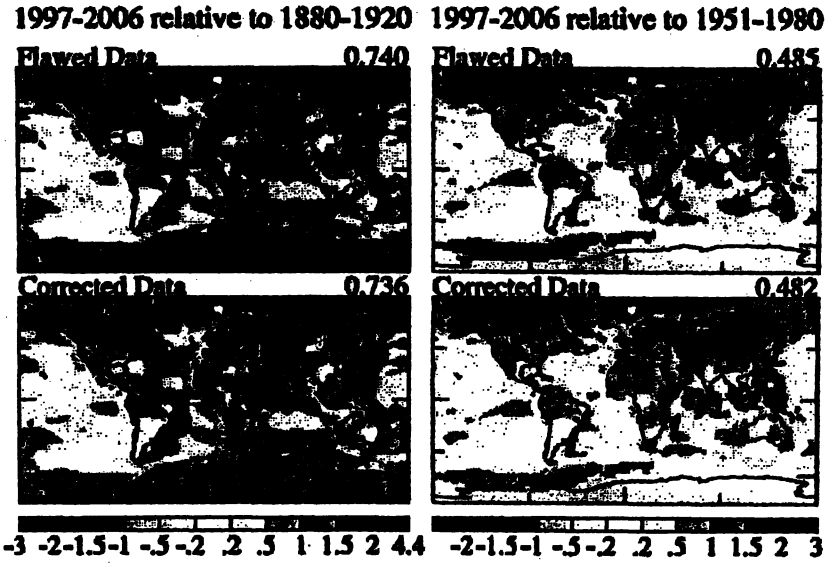

Figure 3. Surface temperature anomalies in the past 10 years (1997-2006) relative to two alternative base periods, 1880-1920 on the left and 1951-1980 on the right. The top row versus the bottom row shows the effect of the data flaw.

Over the past 30 years temperature isotherms have been moving poleward in the Northern Hemisphere land areas at a rate of about 50 km per decade. If the movements were fluctuations, their impacts would be limited. However, continual change of the same sense has a cumulative effect on the ability of species to survive in the presence of other stresses. Moreover, under business-as-usual growth of greenhouse gas emissions the rate of movement of isotherms could double this century, as discussed in several papers available on our web site, including
"Dangerous" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf
"Trace Gases" http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf

Implications of this rapid and growing global climate change are discussed in "The 800 Pound Gorilla: The Threat and Taming of Global Climate Change",
"Gorilla" http://www.giss.nasa.gov/~jhansen/preprints/
"Gorilla" is adapted from "The Threat to the Planet" (13 July 2006 New York Rev. Books) with assistance of Walter Simpson. "Gorilla" includes sidebars on 'Likely Consequences of Global Climate Change' and 'Three Policies Needed to Defuse the Global Warming Time Bomb'.

Usufruct. The deceit behind the attempts to discredit evidence of climate change reveals matters of importance. This deceit has a clear purpose: to confuse the public about the status of knowledge of global climate change, thus delaying effective action to mitigate climate change. The danger is that delay will cause tipping points to be passed, such that large climate impacts become inevitable, including the loss of all Arctic sea ice, destabilization of the West Antarctic ice sheet with disastrous sea level rise later this century, and extermination of a large fraction of animal and plant species (see "Dangerous", "Trace Gases", and "Gorilla" papers).

Make no doubt, however, if tipping points are passed, if we, in effect, destroy Creation, passing on to our children, grandchildren, and the unborn a situation out of their control, the contrarians who work to deny and confuse will not be the principal culprits. The contrarians will be remembered as court jesters. There is no point to joust with court jesters. They will always be present. They will continue to entertain even if the Titanic begins to take on water. Their role and consequence is only as a diversion from what is important.

The real deal is this: the 'royalty' controlling the court, the ones with the power, the ones with the ability to make a difference, with the ability to change our course, the ones who will live in infamy if we pass the tipping points, are the captains of industry, CEOs in fossil fuel companies such as EXXON/Mobil, automobile manufacturers, utilities, all of the leaders who have placed short-term profit above the fate of the planet and the well-being of our children. The court jesters are their jesters, occasionally paid for services, and more substantively supported by the captains' disinformation campaigns.

Court jesters serve as a distraction, a distraction from usufruct. Usufruct is the matter that the captains wish to deny, the matter that they do not want their children to know about. They realize that if there is no 'gorilla', then usufruct is not an important issue for them. So, with the help of jesters, they deny the existence of the gorilla. There is no danger of melting the Arctic, of destabilizing the West Antarctic ice sheet, of increasing hydrologic extremes, more droughts and stronger forest fires on one hand and heavier downpours and floods on the other, threats to the fresh water supplies of huge numbers of people in different parts of the globe. "Whew! It is lucky that, as our jesters show, these are just imaginary concerns. We captains of industry can continue with business-as-usual, we do not need to face the tough problem of how to maintain profits without destroying our legacy in our children's eyes."

Usufruct is as American as the Declaration of Independence, implicit in the Preamble "...to ourselves and our Posterity...". It is explicitly discussed in a famous letter of 6 September

1789 from Thomas Jefferson to James Madison, discussing the proposed Bill of Rights to be added to the Constitution: "The question whether one generation of men has a right to bind another. . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground, which I suppose to be self-evident, 'that the Earth belongs in usufruct to the living' . . ."

Jefferson's philosophy regarding generational relations was based on this "self-evident" principle. That we have an obligation to preserve Creation for today's and future generations is a widely held belief. Native American Oren Lyons, a Faithkeeper in the Onondaga Nation, discusses the belief of Native Americans in their obligations to the "seventh generation". It is also a biblical paradigm that the Earth, Creation, is an intergenerational commons, the fruits and benefits of which should be accessible to every member of every generation.

Is the principle that the Earth belongs to us only in usufruct indeed self-evident and accepted by the public? In "Gorilla" I note the observation of Larry King that "nobody cares about 50 years from now". We can't take both positions. We need to make up our mind. Do we care?

I am puzzled by views expressed by some conservatives, views usually expressed in vehement unpleasant ways in e-mails that I have been bombarded by in the past several days. It is a bit disconcerting as I come from a moderately conservative state, and I consider myself a moderate conservative in most ways. It is puzzling, because it seems to me that conservatives should be the first ones standing up for preserving Creation, and for the rights of the young and the unborn. That is the basic intergenerational issue in global warming and the headlong use of fossil fuels: the present generation is, in effect, ripping off future generations.

Is it possible that conservatives have been too quick to support the captains of industry? If we allow industry to continue on a path of denial, to focus on their short-term profits, to deny the rights of our children, grandchildren and the unborn, if the planet passes climate tipping points, will we not share in the infamy, the infamy of the captains of industry?

It seems to me that the present situation, with only minimalist actions to mitigate global climate change, reflects, at least in part, the "success" of the disinformation campaign that the captains of industry have at least tolerated, and, in some cases, encouraged and supported. Of course Nature will, eventually, reveal the truth, but there is potentially great harm in the disinformation, because it increases the likelihood that we will pass climate tipping points.

The captains of industry are smarter than their jesters. They cannot pretend that they are unaware of climate change dangers and consequences for future generations. It is time for the captains of industry to rethink their positions. I do not mean, time to polish their image with marginal investments, 'green' advertisements, and other public relations gimmicks. I mean, time to consider how they will function as we move toward a cleaner world 'beyond petroleum', to invest in approaches that will help take us from here to there, and to begin to move smartly in that direction. There is still time to avert the most dramatic climate effects, if we promptly begin to address both CO_2 and non-CO_2 climate forcings. But just barely.

I am indebted to Jim Wine for schooling me in 'usufruct'.

Criticisms, as always, are welcome.

> was supposed
> to" - seems to improve legibility.
>
> Reto
>
> -------- Forwarded Message --------
> From: Reto Ruedy <rruedy@giss.nasa.gov>
> Reply-To: rruedy@giss.nasa.gov
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov,
> robert.j.gutro@nasa.gov,
> makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web
Site
> Date: Wed, 15 Aug 2007 17:46:00 -0400
>
> It becomes clearer if we split that sentence into
2
> sentences:
>
> The flawed program replaced for some US stations the
1880-1999
> record by
> records adjusted for instrumentation and procedural
changes,
> as it was
> supposed to. However, it used the original source
for the
> years after
> 1999 without modifying them to fit the adjusted
data. The
> result was ...
>
> Sorry for the long complicated sentence,

>
> ! Hope that makes it better.
>
> Reto
>
>
> On Wed, 2007-08-15 at 16:42 -0400, James Hansen
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> > there must be something wrong with the second
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> please
> > reread it Reto. Jim
> >
> > On 8/15/07, lesgiss@verizon.net
<lesgiss@verizon.net> wrote:
> >
> > Thanks, Reto.
> >
> > I spoke with Tabatha again..she said Jack
Kaye
> suggested
> > adding the details
> > that the changes were to US stations only,
and only
> > post-2000...
> >
> > Jim--if Reto's revisions, and Jack's are
okay,

> please let me
> > know.
> >
> > Leslie
> > Original Message:
> > ----------
> > From: Reto Ruedy rruedy@giss.nasa.gov
> > Date: Wed, 15 Aug 2007 15:24:29 -0400
> > To: jhansen@giss.nasa.gov,
lesgiss@verizon.net,
> > ltravis@giss.nasa.gov,
> > robert.j.gutro@nasa.gov,
makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note
for Web
> Site
> >
> >
> > Here is my suggested revision:
> >
> > Researchers at NASA's Goddard Institute
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> Studies in
> > New York
> > recently revised information on their
global
> temperature
> > record based on
> > corrected data. The program that replaced
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> > 1880-1999 record by records that were
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> > instrumentation and
> > procedural changes, used the original
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> > years without
> > modifying them to fit the adjusted data.
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> was a
> > discontinuity
> > in year 2000 for the US stations involved.
Since the
> necessary
> > adjustment was positive for about half the
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> and
> > negative for the
> > other half, the effect on US means was a
> discontinuity of
> > +.15C, and
> > of .003C for the global mean series. The
> researchers ...
> >
> > Reto
> >
> > On Wed, 2007-08-15 at 14:42 -0400, James
Hansen
> wrote:
> > > This seems fine to me. Reto or Makiko
may want to

> > comment. Jim
> > >
> > > On 8/15/07, lesgiss@verizon.net
> <lesgiss@verizon.net > wrote:
> > > > Hi Jim:
> > >
> > > > This is the draft statement
prepared by
> Tabatha
> > > Thompson, of
> > > > HQ PAO, and
> > > > submitted to Jack Kaye....is
this okay
> with you?
> > > >
> > > > Thanks.
> > >
> > > > Leslie
> > >
> > >
> > > > Original Message:
> > > > ----------
> > > > From: Thompson, Tabatha
(HQ-NB000)
> > > Tabatha.Thompson-1@nasa.gov
> > > > Date: Wed, 15 Aug 2007 14:24:47
-0400
> > > > To: leslie.m.mccarthy@nasa.gov
> > > > Subject: FW: Per our Discussion
- Note for
> Web Site
> > >
> > >
> > > > How does this look to you?
> > >
> > > > >
>
> > _____ > > > From: Thompson,
Tabatha
> (HQ-NB000)
> > > > Sent: Wednesday, August 15,
2007 11:57
> AM
> > > > To: Kaye, Jack A. (HQ-DK000)
> > > > Subject: Per our
Discussion - Note
> for Web
> > > Site
> > > > >
> > > > Jack,
> > > > Per our discussion, please
review the
> following
> > > statement.
> > > > Once I hear
> > > > from you, I'll send it to our
web
> people.
> > > > ttt
> > > > Researchers at NASA's Goddard
Institute
> for Space
> > > Studies in

> > > New York
> > > > recently revised information on their
> global
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> > > record based
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> > > generated the
> > > > temperature record was produced with the
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> > > data from
> > > > monitoring stations would be adjusted to
> account
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> > > such as
> > > > the time of day at which measurements
> were made.
> > However,
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> and the
> > program used
> > > data from
> > > > monitoring stations that had not been
> adjusted.
> > The result
> > > was a
> > > > discontinuity in temperature variance in
> 2000. The
> > > researchers have
> > > > corrected the computer program and
> posted their
> > revised
> > > data. More
> > > > information is available here: (LINK TO
> GISS
> > SITE).
> > > >
> > > >
> > >
> > >
> > >
> > >
> >
>

> > > mail2web - Check your email from the web
> at
> > >
http://link.mail2web.com/mail2web
> > >
> > >

> > > >
> > > >
> > > --
> > > Reto Ruedy <rruedy@giss.nasa.gov>
> > >
> > >
> >

> > > mail2web.com - What can On Demand Business
Solutions
> > do for
> > > you?
> > >
http://link.mail2web.com/Business/SharePoint
> > >
> > >
> > >
> > >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 10:57:53 -0400
To: lesgiss@verizon.net

No - I'd like Jim to ok this version before it goes any further. I noticed that the various pieces did not fit together smoothly. But somebody should definitely check it.

Reto

On Thu, 2007-08-16 at 10:47 -0400, lesgiss@verizon.net wrote:

Hi Reto:

Thanks....so you think this is now agreed upon by all and can be sent to HQ???

Leslie

Original Message:

From: Reto Ruedy rruedy@giss.nasa.gov
Date: Thu, 16 Aug 2007 10:46:20 -0400
To: lesgiss@verizon.net, jhansen@giss.nasa.gov, makis@giss.nasa.gov, ltravis@giss.nasa.gov, robert.j.gutro@nasa.gov
Subject: Re: [Fwd: Re: FW: Per our Discussion - Note for Web Site]

So here is an attempt to put the pieces together; I also adjusted the beginning and end to fit the other modifications; please don't hesitate to further improve my style:

Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record after correcting a step in their data acquisition procedure. That process appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, it reverted to the unadjusted data after 1999, the last year for which the adjusted data were available. This resulted in a discontinuity in year 2000 for the US stations involved. The necessary adjustments turned out to be positive for about half the stations and negative for the other half, so the effect was reduced to a jump of +.15C for the US means, and a jump of +.003C for the global means, well within the margin of error. The researchers corrected the computer program and posted their revised data. More information is available here: (LINK TO GISS SITE).

Reto

On Wed, 2007-08-15 at 21:53 -0400, James Hansen wrote:

yes, those are fine

On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

This sounds much better but I think we should add:

"for the period 1880-1999"

at the end of the 1st sentence

and

"when the adjusted data ended"

at the end of the 2nd sentence or something like that.

Reto

On Wed, 2007-08-15 at 18:45 -0400, James Hansen wrote:
> Here is my suggestion:
>
> The flawed program appropriately replaced some US station records with
> records adjusted for instrumental and procedural changes. However,
> the program reverted to unadjusted data for subsequent years. The
> result was...
>
> Jim
> On 8/15/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Not sure about punctuation, but I added a "," before "as it
> was supposed
> to" - seems to improve legibility.
>
> Reto
>
> -------- Forwarded Message --------
> From: Reto Ruedy <rruedy@giss.nasa.gov>
> Reply-To: rruedy@giss.nasa.gov
> To: James Hansen <jhansen@giss.nasa.gov>
> Cc: lesgiss@verizon.net, ltravis@giss.nasa.gov,
> robert.j.gutro@nasa.gov,
> makis@giss.nasa.gov
> Subject: Re: FW: Per our Discussion - Note for Web Site
> Date: Wed, 15 Aug 2007 17:46:00 -0400
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> The flawed program replaced for some US stations the 1880-1999
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> years after
> 1999 without modifying them to fit the adjusted data. The
> result was ...
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> Sorry for the long complicated sentence,

>
> ! Hope that makes it better.
>
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> On Wed, 2007-08-15 at 16:42 -0400, James Hansen wrote:

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> > reread it Reto. Jim
> >
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> > Thanks, Reto.
> >
> > I spoke with Tabatha again..she said Jack Kaye
> > suggested
> > adding the details
> > that the changes were to US stations only, and only
> > post-2000...
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> > Jim--if Reto's revisions, and Jack's are okay,
> > please let me
> > know.
> >
> > Leslie
> > Original Message:
> > ----------
> > From: Reto Ruedy rruedy@giss.nasa.gov
> > Date: Wed, 15 Aug 2007 15:24:29 -0400
> > To: jhansen@giss.nasa.gov, lesgiss@verizon.net,
> > ltravis@giss.nasa.gov,
> > robert.j.gutro@nasa.gov, makis@giss.nasa.gov
> > Subject: Re: FW: Per our Discussion - Note for Web
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> > > > -----------------
> > > > From: Thompson, Tabatha (HQ-NB000)
> > Tabatha.Thompson-1@nasa.gov
> > > > Date: Wed, 15 Aug 2007 14:24:47 -0400
> > > > To: leslie.m.mccarthy@nasa.gov
> > > > Subject: FW: Per our Discussion - Note for
> > Web Site
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> > >
> > > > How does this look to you?
> > >
> > > >
> > > > _____
> > > > From: Thompson, Tabatha
> > (HQ-NB000)
> > > > Sent: Wednesday, August 15, 2007 11:57
> > AM

> > > > To: Kaye, Jack A. (HQ-DK000)
> > > > Subject: Per our Discussion - Note for Web Site
> > > >
> > > > Jack,
> > > > Per our discussion, please review the following statement.
> > > > Once I hear from you, I'll send it to our web people.
> > > > ttt
> > > > Researchers at NASA's Goddard Institute for Space Studies in New York recently revised information on their global temperature record based on corrected data. The computer modeling program that generated the temperature record was produced with the assumption that data from monitoring stations would be adjusted to account for changes such as the time of day at which measurements were made. However, the adjusted data were not always readily available and the program used data from monitoring stations that had not been adjusted. The result was a discontinuity in temperature variance in 2000. The researchers have corrected the computer program and posted their revised

> > > data. More
> > > > information is available here:
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> GISS
> > SITE).
> > > >
> > > >
> > >
> > >
> > >
> >
>

> > > mail2web - Check your email from
the web
> at
> > >
http://link.mail2web.com/mail2web
> > >
> > >
> > >
> > >
> > --
> > Reto Ruedy <rruedy@giss.nasa.gov>
> >
> >
>

> > mail2web.com â€" What can On Demand Business
Solutions
> do for
> > you?
> >
http://link.mail2web.com/Business/SharePoint
> >
> >
> >
> >
> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: RE: Access to GISTEMP]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:23:12 -0400
To: lesgiss@verizon.net

Jim's email just came in - he changed one sentence (obviously he did not like my "jumps") - fine with me.

Below is the whole interaction as far as access questions are concerned.

Reto

-------- Forwarded Message --------
From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
To: rruedy@giss.nasa.gov
Subject: RE: Access to GISTEMP
Date: Thu, 17 May 2007 18:03:28 -0400

Thank you for this. I will observe this condition.

I realize that you have provided some documentation of what you did. In econometrics, it is a condition of publication in journals that authors archive their code and data so that their results can be routinely replicated. I realize that no such standards apply to climate science. However, equally, there is no prohibition on individual climate scientists voluntarily adopting these best practice standards. In that spirit, I would appreciate it if I could inspect the code used to process the GHCN data. Thanks, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Thursday, May 17, 2007 5:41 PM
To: Steve McIntyre
Cc: rschmunk@giss.nasa.gov
Subject: RE: Access to GISTEMP

After a short meeting with Dr. Hansen, we were advised to let you download whatever you want as long as generally accepted protocols are observed. Please try to do so at a time that does not impact other users, i.e. late nights, weekends.

What we did with the GHCN data is carefully documented in the publications listed on our website. We are not creating an alternate version of the GHCN data, we are mainly combining their data in various steps to create our anomaly maps.

Sincerely,

Reto A. Ruedy

On Thu, 2007-05-17 at 16:37 -0400, Steve McIntyre wrote:

> In answer to your question, I'm interested in the data as it is presented to the public. All I was doing was downloading the data that is supposedly available to the public, but in a way that would not take
> 4 weeks of manual labor. If your version differs from the GHCN version,
> I'm interested in downloading your version so that I can assess the differences.

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Thursday, May 17, 2007 4:14 PM
To: Steve McIntyre
Cc: 'Robert B. Schmunk'
Subject: RE: Access to GISTEMP

Dear Steve,

Our main focus working with observed data is creating a gridded set of temperature anomalies which gives reasonable means over comparatively large regions - the global mean average being one of the major goals. If you are interested in individual stations, you are much better off working directly with the GHCN data.

Our station data are really intermediate steps to obtain a global anomaly map, and are not to be viewed as an end result. A modified time series for a particular location may be more representative for the surrounding region than for that particular location. So it is important to use these data in the proper context.

All our publications and investigations deal with regional temperature anomalies and that is the only use these data are good for after our modifications.

If you still think that downloading our "scratch pads" is important to your investigations, please let me know exactly what stage after the raw GHCN data you need and maybe an indication why you need it, and I'll try to provide you with the necessary data.

Again, we are not trying to compete with GHCN as provider of station data; we are using their data for a very specific project and we made - perhaps unwisely - some of our tools that we used to test the various steps of our process available on the web.

Reto

On Thu, 2007-05-17 at 15:18 -0400, Steve McIntyre wrote:
> I know how to use the GHCN data. I'm not interested in "tips" on how to use it.
>
> I'm interested in the versions as used by GISS. The GHCN version is convenient to download and I see no reason why GISS versions should not be available on equivalent terms.
>
> Steve McIntyre
>
> -----Original Message-----

> From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> Sent: Thursday, May 17, 2007 2:58 PM
> To: Steve McIntyre
> Subject: Re: Access to GISTEMP
>
> Please contact the GISTEMP group and inquire if they are
> willing to provide you with the dataset(s) from which the
> website applications extract information.
>
> If they are not (I do not know what their current policy
> on this), then you can go a step closer to the source and
> obtain station data from the same location that the GISTEMP
> group obtains the original "raw" datasets that they work
> from. That is the Global Historical Climatology Network at
> http://www.ncdc.noaa.gov/oa/climate/ghcn-monthly/index.php
>
> I'm not sure which specific files from the GHCN site are
> used. But if the complete GISTEMP data are not available
> then perhaps Dr. Ruedy of the GISTEMP group could give you
> some tips on how to use the GHCN data.
>
> rbs
>
> On May 17, 2007, at 14:46, Steve McIntyre wrote:
>
> > How can I download the data then?
> >
> > -----Original Message-----
> > From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
> > Sent: Thursday, May 17, 2007 2:35 PM
> > To: Steve McIntyre
> > Cc: Reto Ruedy
> > Subject: Re: Access to GISTEMP
> >
> > On May 16, 2007, at 23:44, Steve McIntyre wrote:
> >
> > > I am blocked from access to the page where the email addresses
> are
> > > located.
> >
> > Good point. That was foolish of me to suggest checking a
> > page on which access had been turned off.
> >
> > I have turned off the restriction that I added to the
> > server on data.giss.nasa.gov last night so that you can
> > access the GISTEMP page and view the contact information.
> >
> > > I have been attempting to collate station data for scientific
> > > purposes.
> > > I have not been running a robot but have been running a program
> in
> > R
> > > that collects station data.

It is an automated process scraping content from the website, and if that isn't what a web robot does, then it's close enough.

rbs

-----Original Message-----
From: Robert B. Schmunk [mailto:rschmunk@giss.nasa.gov]
Sent: Wednesday, May 16, 2007 11:33 PM
To: Steve McIntyre
Cc: Reto Ruedy
Subject: Re: Access to GISTEMP

Steve,

Although you did not provide any further details about your problem, I will assume that you are the person on the cable.rogers.com network who has been running a robot for the past several hours trying to scrape GISTEMP station data and who has made over 16000 (!) requests to the data.giss.nasa.gov website.

Please note that the robots.txt file on that website includes a list of directories which any legitimate web robot is forbidden from trying to index. That list of off-limits directories includes the */work/* and */cgi-bin/* directories.

Because the robot running on the cable.rogers.com network has rather obviously and blatantly violated those rules, I placed a block on our server restricting its access to the server.

If you are indeed the person who has been running that particular web robot, and if you do need access to some large amount of the GISTEMP station data for a scientific purpose, then you should contact the GISTEMP research group to explain your needs. E-mail addresses for the GISTEMP research group are located at the bottom of the page at http://data.giss.nasa.gov/gistemp/

rbs

On May 16, 2007, at 23:17, Steve McIntyre wrote:

> When I try to access GISS station files,
> http://data.giss.nasa.gov/
> gistemp/station_data/
>
> I am getting the following diagnostic:

Forbidden
You don't have permission to access */gistemp/station_data/* on this server.

Apache/2.0.52 (Unix) Server at data.giss.nasa.gov Port 80

--
Robert B. Schmunk, rschmunk@giss.nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

--
Robert B. Schmunk, rschmunk@giss.nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

--
Robert B. Schmunk, rschmunk@giss.nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY 10025

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: please verify
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 11:40:29 -0400
To: lesgiss@verizon.net

That's fine - Reto

On Thu, 2007-08-16 at 11:31 -0400, lesgiss@verizon.net wrote:

> Hi Reto:
>
> Please verify this final version is okay:
>
> Researchers at NASA's Goddard Institute for Space Studies in New York recently revised their global temperature record after correcting a step in their data acquisition procedure. The prior process appropriately replaced some US station records with records adjusted for instrumental and procedural changes. However, it reverted to the unadjusted data after 1999, the last year for which the adjusted data were available. This resulted in a discontinuity in year 2000 for the US stations involved. The adjustments necessary to remove the discontinuity turned out to be positive for about half the stations and negative for the other half. The net effect of the prior flaw was to increase the mean US temperature by about 0.15C and global temperature by about 0.003C, changes that were within the margin of error. The researchers corrected the computer program and posted their revised data on 7 August 2007. More information is available here: (LINK TO GISS SITE).
>
> Thanks.
>
> Leslie
>
> ---
> mail2web - Check your email from the web at
> http://link.mail2web.com/mail2web

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Times newspaper in UK
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 12:23:04 -0400
To: lesgiss@verizon.net

I talked to Lewis Smith and he seemed to understand what happened; also he did not seem too surprised that the whole thing turned out to be a non-story (better, a combination of 2 non-stories).

Reto

On Thu, 2007-08-16 at 11:45 -0400, lesgiss@verizon.net wrote:

> The reporter for the Times in London is
>
> Lewis Smith
>
> 0044 207-782-5558
>
> He would like to speak to someone within the next hour...
>
> I also got a call from a call from the Mail in London...which I sent to Gavin..but I have not heard from him...
>
> ---
> mail2web.com - Enhanced email for the mobile individual based on Microsoft® Exchange - http://link.mail2web.com/Personal/EnhancedEmail

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: draft McIntyre statement
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 13:47:22 -0400
To: lesgiss@verizon.net

Leslie,

It might be good to note, that Steve got the time line wrong; the first time he contacted us was AFTER and BECAUSE his massive downloads got blocked by our webmaster; he never contacted us before that event.

So the claim that he downloaded our data because we refused to honor any of his requests is pure invention.

Blocking that IP address was a routine action any webmaster would take if he sees that one particular user monopolizes access to his web site. He had no idea about the identity of the owner of the IP address.

After he contacted us, his name did not ring any bells; we assumed it was a researcher interested in all station data. Since our data are organized for users to view individual stations rather than for massive downloads, we thought we could help him by directing him to GHCN where we got the data from and where they are organized for easy download.

Some data providers insist that we don't pass on their data; we are asked to refer requests to them, since they want to keep control of the distribution of their data. That is why we have to clear any data requests with Dr. Hansen. We were able to do that the very same day.

His first request for "our code" came in the same email in which he thanked us for giving him full access to our data.

That request was so general, that we had no idea what code he was talking about. Only after consulting his blog site did we learn that he is under the false impression that we have secret software that can "fix" faulty data. Since we don't have any such software, we were unable to honor this particular request.

The truth is that all our programs are fully documented in the literature and on our web site. Their task is to combine the station data into a gridded data set of anomalies. No fixes are applied except a simple well-documented urban adjustment (that happens to reduce the warming trend more than other groups' adjustment schemes). No "magic fix" programs are used. Instead we estimate and take into consideration the resulting margin of error before we draw any conclusions, a habit that distinguishes serious researchers from pranksters.

Reto

On Thu, 2007-08-16 at 12:20 -0400, lesgiss@verizon.net wrote:

> Hi Reto:
>
> I have not heard from Jim about the McIntyre allegations of cutting off his IP address...but drafted this short response...what do you think???
>
> ---
>
> On May 16, 2007, an IP address attached to a cable.rogers.com network made 16,000 attempts in several hours to scrape GISTEMP station data. The webmaster had noted that this large volume was dramatically slowing access to the site and data by other users. That address was blocked by the GISS

webmaster as it violated rules from using web robots to access off-limits directories. The webmaster had no idea of the identity of the user until Dr. McIntyre emailed the webmaster. He was then advised of the reason for his service denial and advised to contact the GISTEMP research group to explain data needs. On the 17th, Dr. McIntyre again inquired about his access and was again advised to contact the GISTEMP group. Dr. Reto Ruedy of the GISTEMP group contacted Dr. McIntyre to discuss his requests.

here we might add: ... requests in an effort to help him to get what he needed.

(need to add in details about his requests to provide data and/or in a format that we don't have—Reto??)

Shortly after that email exchange, Dr. McIntyre was advised that he could again begin downloading provided that he accepted generally accepted protocols, i.e. doing so at times so as to not adversely affect other users (late nights, weekends, etc.).

Leslie

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Blog post re: year 2000 correction
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 13:59:44 -0400
To: "Winstein, Keith" <Keith.Winstein@wsj.com>

Hi Keith,

On Thu, 2007-08-16 at 13:21 -0400, Winstein, Keith wrote:

> Hi Dr. Ruedy,
>
> FYI, here is the blog post: http://blogs.wsj.com/numbersguy .
>
> Thanks very much for your assistance with this. I recognize that you probably (justifiably) view this as a bogus tempest in a teapot, and I hope that my blog post doesn't further fuel this picayune faux-controversy. But there is a significant group of amateurs that were very interested in the answer to these questions, so I'm sincerely grateful that you were willing to help set the record straight.
>
> Please let me know if you have any corrections, questions or comments.
>
> (By the way, I apologize for "Mr. Ruedy" -- our practice in the paper is to reserve "Dr." for a medical doctor.)

No problem with that.

> Best,
> Keith

Unfortunately, I don't seem to be set up to get to your web site because of a "precondition failed" error and our web master is on vacation.

Is there any way you could email your article to me - I'd be very interested to see what came out of our conversation.

Cheers,

Reto

Subject: Re: Blog post re: year 2000 correction
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 15:19:09 -0400
To: "Winstein, Keith" <Keith.Winstein@wsj.com>

Hi Keith,

A systems person helped me get through ! Obviously, I like the tenor of your article and I seem to have been able to get most of the facts across.

There is one point that I was less than clear about: The main reason why the global mean is more useful than the US mean (independent of how many stations we use) is that the global mean shows much smaller annual variations being determined by the energy balance of the whole atmosphere and uninfluenced by how these imbalances happen to be distributed over the world. So whereas the US means fluctuate wildly from year to year with of .5-1.5C, the global means are much steadier (.1-.2C unless there is a massive volcano eruption) and any potential longterm trend is much easier to verify or disprove when looking at these data.

It was also useful to read what Steve told you - his and his people's (A.Watts) blogs sound very differently. He obviously noticed that their distortions of the truth went way beyond the acceptable limits. Unfortunately, transcripts of interviews he gave clearly show that he has no hesitation telling obvious lies, and under these circumstances any discussions seem pointless to me.

If anybody, including him, points out questionable data on our web site, we'll investigate and take the necessary steps to eliminate any potential flaws.

Reto

PS In the mean time your 2nd email arrived.

On Thu, 2007-08-16 at 13:21 -0400, Winstein, Keith wrote:

> Hi Dr. Ruedy,
>
> FYI, here is the blog post: http://blogs.wsj.com/numbersguy .
>
> Thanks very much for your assistance with this. I recognize that you probably (justifiably) view this as a bogus tempest in a teapot, and I hope that my blog post doesn't further fuel this picayune faux-controversy. But there is a significant group of amateurs that were very interested in the answer to these questions, so I'm sincerely grateful that you were willing to help set the record straight.
>
> Please let me know if you have any corrections, questions or comments.
>
> (By the way, I apologize for "Mr. Ruedy" -- our practice in the paper is to reserve "Dr." for a medical doctor.)
>
> Best,
> Keith

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: Question
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 17:46:14 -0400
To: "POSAMENTIER, HENRY W" <HENRY.POSAMENTIER@chevron.com>
CC: Makiko Sato <makis@giss.nasa.gov>

Dear Dr. Posamentier,

As described in detail in the papers mentioned below, we did not try to think up any adjustments, but finessed the whole question as follows: We basically tweak the urban records so that they look exactly like their rural neighbors as far as the long term trend is concerned.

For each urban station, we compute a mean series based on all neighboring rural stations. If there are not enough rural stations near that urban station, we completely disregard the urban station. If the urban station is longer than the rural combination, the unsupported part of the urban station is dropped. Finally we find a best approximation to the difference between rural and urban series with a straight line or a line with a knee at a variable point and subtract that difference from the urban record.

For alternate approaches to this question, please contact USHCN. They employ a team of people working full time on observed data analysis. We are a modeling group and spend just enough time on observed temperature data to keep our temperature website up-to-date.

Reto A. Ruedy

On Thu, 2007-08-16 at 15:27 -0400, Makiko Sato wrote:

> Reto,
>
> Could you please reply to him when you have time to?
>
> Thank you,
> Makiko
>
> At 15:23 2007/08/16, you wrote:
>
> > Dear Dr. Sato,
> >
> > Thanks for getting back to me so quickly. Please allow me to ask yet another question. Given that pre-1982 data seem to be dependent exclusively on meteorological stations on land, how do you compensate for heat island effects? I realize that I may be asking a question that requires more than just a simple answer - my apologies for that.
> >
> > Regards,
> > Henry Posamentier
> >
> > -----Original Message-----
> > From: Makiko Sato [mailto:makis@giss.nasa.gov]
> > Sent: Thursday, August 16, 2007 10:54 AM
> > To: POSAMENTIER, HENRY W; makikosato@giss.nasa.gov
> > Cc: James.E.Hansen@nasa.gov; rruedy@giss.nasa.gov
> > Subject: Re: Question
> >
> > Dear Dr. Posamentier;
> >
> > As described in our 1996
> > (http://pubs.giss.nasa.gov/abstracts/1996/Hansen_etal_1.html), 1999

(http://pubs.giss.nasa.gov/abstracts/1999/Hansen_etal.html) and 2001 (http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html) papers, the land-ocean temperature index is created by combining meteorological station measurements over land and sea surface temperature data [HadISST (http://www.hadobs.org) and the satellite data]. The satellite data are used only over the ocean and only since 1982, and satellite night light data are used for the U.S. land areas to distinguish urban, peri-urban and rural areas.

Sincerely,

Makiko Sato

At 08:04 2007/08/16, POSAMENTIER, HENRY W wrote:

> Dear Dr. Sato,
>
> I note with interest the figures you published on the GISS website (<http://data.giss.nasa.gov/gistemp/graphs/>http://data.giss.nasa.gov/gistemp/graphs/).
> In particular, I am interested in the figures showing global annual mean surface air temperature change (land-ocean index) and the annual mean temperature change for three latitudinal belts. To what extent have you used satellite imagery vs. ground-based meteorological station
>
> data, given that satellite imagery is a comparatively recent source of information and some of your graphs go back to 1880? Thanks in advance
>
> for your time in answering these questions.
>
> Best regards,
>
> Henry W. Posamentier, PhD
> Chevron Energy Technology Company
> 1500 Louisiana Street
> Houston, TX 77002-7308
> 1-832-854-7646
> (Cell)
> 1-832-854-7070 (Fax)

Subject: Re: response on McIntyre IP claims??
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 18:08:31 -0400
To: Gavin Schmidt <gschmidt@giss.nasa.gov>

Gavin,

So you don't think it is worth to point out that the whole first part of the interview section below is a total fabrication, and his first request for source code came with the "thank you" note mentioned at the end of the response, still May 17. Also, his reasons for our "reluctance" is wild speculation that is light years away from reality.

On second thought, it's not worth going into these details, especially in a case where the interviewer is more likely to believe Steve than us.

So, I'm fine with the edits.

Reto

On Thu, 2007-08-16 at 17:31 -0400, Gavin Schmidt wrote:
> a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.
>
> gavin
>
> On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:
> > I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.
> >
> > Take a look at it...I'm also sending it to Reto and Gavin as well.
> >
> > Leslie
> >
> > Original Message:
> > ----------
> > From: James Hansen jhansen@giss.nasa.gov
> > Date: Thu, 16 Aug 2007 16:33:28 -0400
> > To: lesgiss@verizon.net, gmail.com, dcain@giss.nasa.gov
> > Subject: Re: response on McIntyre IP claims??
> >
> > Do we want to lower ourselves to debating with a court jester? Of course, that is what he wants.
> >
> > I don't have a strong preference as long as it is not taking a significant amount of my time.
> >
> > I have not read the stuff that you are referring to, but as I recall, as soon as I was told about the matter, I said that he was welcome to the data.
> >
> > Jim
> >
> > On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> >
> > Hi Jim:

Amanda Carpenter of Townhall.com has inquired if we will have a response to
McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.

Thanks.

Leslie

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: Re: response on McIntyre IP claims??]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 18:36:55 -0400
To: lesgiss@verizon.net

Leslie,

Sorry that my response by mistake only was sent to Gavin. So below is what I wrote and above it Gavin's response. I don't think Jim is interested in hearing any more about it.

Reto

-------- Forwarded Message --------
From: Gavin Schmidt <gschmidt@giss.nasa.gov>
To: rruedy@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??
Date: 16 Aug 2007 18:16:22 -0400

the issue is here that you are dealing with a hostile interviewer. In such circumstances, it is much better simply to point out clear errors. If you open up another front they will dive on that instead and abandon all the previous positions (since they are not sincere in any case).

It does however highlight the rhetorical power of saying that the code is secret and things are being kept from the public. It may still be worth putting up a clean version of the adjustment program on the website in order to have something to point to in such cases.

gavin

On Thu, 2007-08-16 at 18:08, Reto Ruedy wrote:
> Gavin,
>
> So you don't think it is worth to point out that the whole first part of the interview section below is a total fabrication, and his first request for source code came with the "thank you" note mentioned at the end of the response, still May 17. Also, his reasons for our "reluctance" is wild speculation that is light years away from reality.
>
> On second thought, it's not worth going into these details, especially in a case where the interviewer is more likely to believe Steve than us.
>
> So, I'm fine with the edits.
>
> Reto
>
> On Thu, 2007-08-16 at 17:31 -0400, Gavin Schmidt wrote:
> > a few suggested edits. I don't advise getting rhetorical so I deleted the third paragraph.
> >
> > gavin
> >
> > On Thu, 2007-08-16 at 17:11, lesgiss@verizon.net wrote:
> > > I agree...but in this case we are in the right. I think we should just make the point clear that McIntyre's story is a fabrication in a very generic way.

Take a look at it...I'm also sending it to Reto and Gavin as well.

Leslie

Original Message:

From: James Hansen jhansen@giss.nasa.gov
Date: Thu, 16 Aug 2007 16:33:28 -0400
To: lesgiss@verizon.net, gmail.com, dcain@giss.nasa.gov
Subject: Re: response on McIntyre IP claims??

Do we want to lower ourselves to debating with a court jester? Of course, that is what he wants.

I don't have a strong preference as long as it is not taking a significant amount of my time.

I have not read the stuff that you are referring to, but as I recall, as soon as I was told about the matter, I said that he was welcome to the data.

Jim

On 8/16/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:

> Hi Jim:
>
> Amanda Carpenter of Townhall.com has inquired if we will have a response to
> McIntyre's claims in their interview yesterday that NASA blocked his IP address? I've heard from both Reto and Robert and can draft something if you want...please let me know.
>
> Thanks.
>
> Leslie
>
> ---
> mail2web.com What can On Demand Business Solutions do for you?
> http://link.mail2web.com/Business/SharePoint

---
mail2web.com Enhanced email for the mobile individual based on Microsoft® Exchange - http://link.mail2web.com/Personal/EnhancedEmail

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: RE: GISS Raw Data]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 19:43:48 -0400
To: gavin@giss.nasa.gov

He never asked for the urban adjustment code; the first request was for "the code that processes the GHCN data". In the interview and on his blog site he asks for the code that "fixes" bad station data - we never claimed to have anything like that. Below he asks essentially for the gridding program. If we relent, his requests will become more insane so that he will always be able to claim that we hide something.

I still think our best defense is the fact that all our procedures are explicitly described and open to anyone who wants to code them in their favorite programming language. This is the proper way to audit our results (and that's what NOAA and other groups are doing).

I was ready to respond to the email below, but before I got around to it he came out with his prank and I have no intention to ever respond to him again.

Reto

-------- Forwarded Message --------
From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
To: rruedy@giss.nasa.gov
Cc: James E. Hansen <jhansen@giss.nasa.gov>
Subject: RE: GISS Raw Data
Date: Wed, 8 Aug 2007 10:46:10 -0400

Dear Dr Ruedy,

Thank you for this information and for the courteous acknowledgement at your website. I can now see where your post-2000 data comes from, but I remain unable to identify a digital source for your data prior to 2000 from available information. I have compared GISS raw to all the archived USHCN versions and have been unable to find a match for US data. In some cases, the differences are substantial.

Can you provide me with (1) a URL from which the U.S. data prior to 2000 (in the version that you used) can be downloaded. (2) If this is no longer possible due to the passage of time, could you please provide me with a copy of the data that you used (or upload it to an area of your FTP site) and also provide its provenance and date of acquisition? Obviously mere print citations are inadequate for this purpose.

I would like to assess the impact of these modifications on the US and global averages for myself. I would appreciate a copy of the source code used for these calculations.

Regards, Steve McIntyre

-----Original Message-----
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Tuesday, August 07, 2007 5:33 PM
To: Steve McIntyre
Cc: James E. Hansen; gavin@giss.nasa.gov
Subject: Re: GISS Raw Data

Dear Sir,

As to the question about documentation, the basic "GISS Surface Temperature Analysis" page starts with a "Background" section whose first paragraph contains the sentence:"Input data for the analysis ,...., is the unadjusted data of GHCN, except that the USHCN station records were replaced by a later corrected version". A similar statement appears in the "Abstract" and the "Introduction" section of our 2001 paper (JGR Vol 106, pg 23,947-23,948). The Introduction explains the above statement in more detail.

In 2000, USHCN provided us with a file with corrections not contained in the GHCN data. Unlike the GHCN data, that product is not kept current on a regular basis. Hence we used (as you noticed) the GHCN data to extend those data in our further updates (2000-present).

I agree with you that this simple procedure creates an artificial step if some new corrections were applied to the newest data, rather than bringing the older data in sync with the latest measurements - as I naively assumed. Comparing the 1999 data in both data sets showed that in about half the cases where the 1999 data were changed, the GHCN data were higher than the USHCN data and in the other half it was the other way round with the plus-corrections slightly outweighing the minus-corrections.

Although trying to eliminate those steps should have little impact on the US temperature trend (much less the global trend), it seems a good idea to do so and I'd like to thank you for bringing this oversight to our attention.

When we did our monthly update this morning, an offset based on the last 10 years of overlap in the two data sets was applied and our on-line documentation was changed correspondingly with an acknowledgment of your contribution. This change and its effect will be noted in our next paper on temperature analysis and in our end-of-year temperature summary.

The effect on global means and all our tables was less than 0.01 C. In the display most sensitive to that change - the US-graph of annual means - the anomalies decreased by about 0.15 C in the years 2000-2006.

Respectfully,

Reto A Ruedy

On Sat, 2007-08-04 at 17:28 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> In your calculation of the GISS "raw" version of USHCN series, it appears to me that, for series after January 2000, you use the USHCN raw version whereas in the immediately prior period you used USHCN time-of-observation or adjusted version. In some cases, this introduces a seemingly unjustified step in January 2000.
>
> I am unaware of any mention of this change in procedure in any published methodological descriptions and am puzzled as to its rationale. Can you clarify this for me?
>
> In addition, could you provide me with any documentation (additional to already published material) providing information on the calculation of GISS raw and adjusted series from USHCN versions,

> including relevant source code. Thank you for your attention, Stephen McIntyre

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: alt.cleaning
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 16 Aug 2007 20:03:24 -0400
To: makis@giss.nasa.gov

Makiko,

I put the files you wanted on /clima1/Steve/alternate_cleaning
Hope I remembered correctly.

Reto

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 17 Aug 2007 11:35:30 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

Jim,

On the USHCN site it says that the data available from their web site go to 2002. I never downloaded them since the stage we use is not stored at that site - we would have to make a special request.

Reto

On Fri, 2007-08-17 at 11:18 -0400, James Hansen wrote:

> Mc claims that USHCN data is actually available up-to-date. Is that right? Jim
>
> On 8/17/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
>
> Good morning:
>
> Here is the Town Hall story entitled "NASA Blocked Climate Change Blogger from Data"...
>
> http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true
>
> Leslie
>
> ---
>
> mail2web.com - Microsoft® Exchange solutions from a leading provider - http://link.mail2web.com/Business/Exchange

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 17 Aug 2007 11:44:09 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

What I wrote was true last week - today it says that monthly data are available from 1900-2005. They must have updated it in the last few days.

Reto

On Fri, 2007-08-17 at 11:35 -0400, Reto Ruedy wrote:

> Jim,
>
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> >
> > http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true
> >
> > Leslie
> >
> >

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 17 Aug 2007 13:29:31 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, gavin@giss.nasa.gov

Jim,

Gavin suggested some time ago that we should do the analysis with the current USHCN.

I downloaded the "FILIN" USHCN data; the filled-in numbers are marked. So I can use or ignore them. I have to write a program anyway to reformat this file to the format used by GHCN. This includes the easy conversion from F to C, but they also use a different set of ID-numbers to characterize the station. So first, I'll have to construct and check a conversion table to identify the stations properly.

Reto

On Fri, 2007-08-17 at 11:44 -0400, Reto Ruedy wrote:
> What I wrote was true last week - today it says that monthly data are available from 1900-2005. They must have updated it in the last few days.
>
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>
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> > > http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_climate_change_blogger_from_data?page=full&comments=true
> > >
> > > Leslie
> > >
> > > ---
> > > mail2web.com - Microsoft® Exchange solutions from a leading provider -
> > > http://link.mail2web.com/Business/Exchange

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 17 Aug 2007 17:04:16 -0400
To: Gavin Schmidt <gschmidt@giss.nasa.gov>
CC: Jim Hansen <jhansen@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, gavin@giss.nasa.gov

TOBS does not have the station history adjustment (SHAP) - FILIN has it and is the last stage before their urban adjustment. I can run with or without the filled-in data (filling in added .05C/century to the US mean trend in our analysis).

Once the new USHCN data are reformatted, it's just a question of what to do with years 2006 and 2007. Otherwise it's simply switching an input file.

I still think, Steve (in the Town Hall interview below and when he talks to anybody but us) mixes us up with Tom Karl's group - they "fix" station data, we don't. If we get this misunderstanding out in the open, it might die down as well.

Reto

On Fri, 2007-08-17 at 16:23 -0400, Gavin Schmidt wrote:
> I didn't suggest using their urban adjustment, but that the most up-to-date USHCN data may have more in the way of documented station adjustments and more data earlier on. The FILIN data do not include their urban adjustment as far as I can tell. I get the impression from the USHCN web site that you should be able to extract just the TOBS corrected data without the FILIN.
>
> The point is to make sure that the difference between the earlier USHCN data set we were using and the latest version does not make a significant difference to the results. Since any independent replication of the GISS procedure will use the currently available data set (not the one we are using), we should probably be ahead of the game in understanding what impact it has.
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>
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> > I downloaded the "FILIN" USHCN data; the filled-in numbers are marked.
> > So I can use or ignore them. I have to write a program anyway to

reformat this file to the format used by GHCN. This includes the easy
conversion from F to C, but they also use a different set of ID-numbers
to characterize the station. So first, I'll have to construct and check
a conversion table to identify the stations properly.

Reto

On Fri, 2007-08-17 at 11:44 -0400, Reto Ruedy wrote:
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> available from 1900-2005. They must have updated it in the last few
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> >
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> > > Mc claims that USHCN data is actually available up-to-date. Is that
> > > right? Jim
> > >
> > > On 8/17/07, lesgiss@verizon.net <lesgiss@verizon.net> wrote:
> > > Good morning:
> > >
> > > Here is the Town Hall story entitled "NASA Blocked Climate
> > > Change Blogger
> > > from Data"...
> > >
> > >
> > > http://www.townhall.com/Columnists/AmandaCarpenter/2007/08/17/nasa_blocked_c
> > >
> > > limate_change_blogger_from_data?page=full&comments=true
> > >
> > > Leslie
> > >
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> > > ---
> > > mail2web.com - Microsoft® Exchange solutions from a leading
> > > provider -
> > > http://link.mail2web.com/Business/Exchange
> > >
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> > >
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Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Town Hall Story on NASA blocking McIntyre access
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 17 Aug 2007 19:28:04 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Gavin Schmidt <gschmidt@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

I understand, that was just meant as a suggestion to bring up on Gavin's RealClimate site, if he needs to counter requests for our "fixing" code.

Reto

On Fri, 2007-08-17 at 19:06 -0400, James Hansen wrote:
> Technical arguments with a jackass or a jester, which most observers not wanting to understand the details, can appear to lower one to a comparable level. Better not argue with him about whether we fix data; we do an urban adjustment, for example. Jim
>
> On 8/17/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> TOBS does not have the station history adjustment (SHAP) - FILIN has it
> and is the last stage before their urban adjustment. I can run with or
> without the filled-in data (filling in added .05C/century to the US mean
> trend in our analysis).
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> do with years 2006 and 2007. Otherwise it's simply switching an input
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> > The point is to make sure that the difference between the earlier USHCN
> > data set we were using and the latest version does not make a

> significant difference to the results. Since any independent replication
> of the GISS procedure will use the currently available data set (not the
> one we are using), we should probably be ahead of the game in
> understanding what impact it has.
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http://www.townhall.com/Columnists/AmandaCarpenter/2007/08
/17/nasa_blocked_c
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limate_change_blogger_from_data?page=full&comments=true
> >         > > >
> >         > > >       Leslie
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> >         > > >       mail2web.com - Microsoft® Exchange
solutions
> >         from a leading
> >         > > >       provider -
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http://link.mail2web.com/Business/Exchange
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> >         > > >
> >         --
> >         Reto Ruedy < rruedy@giss.nasa.gov>
> >
--
Reto Ruedy <rruedy@giss.nasa.gov>
```

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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: USA temperatures - question from USA TODAY
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 29 Aug 2007 08:20:44 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: "Rice, Doyle" <drice@usatoday.com>, Makiko Sato <makis@giss.nasa.gov>, James.E.Hansen@nasa.gov, Reto Ruedy <cdrar@giss.nasa.gov>

Jim,

You could mention one other difference:

NCDC's curve is based exclusively on the 1221 closely examined and carefully corrected USHCN full data records, GISS's curve was culled from our GLOBAL analysis, i.e. from global maps produced by combining all available station records; this includes the part of the USHCN data that could be downloaded from USHCN's web site (ending currently with year 2005), but it also uses the remaining 541 US stations, and as far as the US mean is concerned, it is also impacted by the non-US stations located within 1200 km of the US border.

Reto

On Wed, 2007-08-29 at 03:41 -0400, James Hansen wrote:

> Doyle,
>
> We start from NCDC raw data, but the analysis method differs, as described in our 2001 paper. As you can discern from that paper, the factor that probably makes the difference regarding our relative rankings of 1934 and 1998 is the method of correcting for urban warming effects, ours yielding a somewhat larger correction. However, the end results are in very good agreement, as you can see by looking at the temperature curves.
>
> Makiko, would you please make available your recent figure with global and U.S. temperature curves? Doyle, you will see that these years are practically indistinguishable. There is no way for anyone to be certain which year was warmer.
>
> Jim
>
> On 8/28/07, Rice, Doyle <drice@usatoday.com> wrote:
>
> Dr. Hansen
>
> We're trying to clarify some points about the US historical temperature record…. Does NASA use a different data set from NCDC? With the recent controversy, we want to be sure we're not comparing apples to oranges as we cover this.
>
> According to NCDC, 2006 was the second-warmest after 1998-
>
> http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php
>
> http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html

But I see in theNASA data, with the recent correction, 1934 is the warmest, with 1998 second followed by 1921 and 2006.

http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

Thanks,

Doyle Rice

Weather Editor

USA TODAY

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: USA temperatures - question from USA TODAY
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 29 Aug 2007 14:45:41 -0400
To: "Rice, Doyle" <drice@usatoday.com>
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>

Doyle,

Since this is a technical question and Dr. Hansen is busy this afternoon, I'll answer it:

No, your statement is NOT correct; to get the US means, NCDC's procedure of only using the best stations is more accurate. If that were our goal, we would proceed in the same way. Actually, whenever we report on US means in our publications, we recompute all US means using only USHCN data.

My recommendation to you is to continue using NCDC's data for the US means and Phil Jones' data for the global means. Our method is geared to getting the global mean and large regional means correctly enough to assess our model results.

We are basically a modeling group and were forced into rudimentary analysis of global observed data in the 70's and early 80's since nobody else was doing that job at the time. Now we happily combine NCDC's and Hadley Center's data to get what we need to evaluate our model results. For that purpose, what we do is more than accurate enough. But we have no intention to compete with either of the other two organizations in what they do best.

Sincerely,

Reto

On Wed, 2007-08-29 at 12:36 -0400, Rice, Doyle wrote:

> Jim
>
> Thank you for sending this clarification. I also received the graphs from Makiko.
>
> So is it correct to say that NASA's data is more accurate than NCDC's since it has more sources? In the media, it would be ideal to refer to one source rather than two. Traditionally we've used NCDC's data.
>
> And globally, we usually use the Hadley Centre data…
>
> http://www.cru.uea.ac.uk/cru/info/warming/
>
> Doyle Rice

From: `gmail.com [mailto: 'gmail.com] On Behalf Of James Hansen
Sent: Wednesday, August 29, 2007 8:48 AM
To: rruedy@giss.nasa.gov
Cc: Rice, Doyle; Makiko Sato; James.E.Hansen@nasa.gov; Reto Ruedy
Subject: Re: USA temperatures - question from USA TODAY

Reto, thanks, good points. Jim

On 8/29/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:

Jim,

You could mention one other difference:

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http://www.ncdc.noaa.gov/oa/climate/research/ushcn/hcntmptrends.php

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But I see in theNASA data, with the recent correction, 1934 is the warmest, with 1998 second followed by 1921 and 2006.

http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

Thanks,

Doyle Rice

Weather Editor

USA TODAY

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: [Fwd: US-lights]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 30 Aug 2007 17:03:06 -0400
To: Marc Imhoff <Marc.L.Imhoff@nasa.gov>
CC: jhansen@giss.nasa.gov, makis@giss.nasa.gov

Hi Marc,

Thanks for the information. I'll cc Jim, in case he wants to comment; but currently we have email overload.

Cheers,

Reto

On Thu, 2007-08-30 at 16:34 -0400, Marc Imhoff wrote:

> Hi Reto,
>
> Sorry for the late reply. I am slammed with the never ending Senior Review for Terra which seems to be more an instrument of torture than peer review these days.
>
> I am assuming that the file you are referring to is the 1995 DMSP data set we ran through a thresholding process which reduced the lit area. It compared very well to the 1990 census estimates of urban places in the US. This was some time ago.
>
> Go ahead and use your best judgement on listing it. It's a bit old which means that urban sprawl has no doubt expanded the footprint considerably. Areas we listed as 'peri-urban' have no doubt increased in urban density.
>
> CIESEN may something similar for more recent times . However, I don't know of any updates using the thresholding and validation methods we derived. We were never able to obtain funding from our program managers in Terrestrial Ecology to continue this work - they didn't see the value.
>
> Any interest from your HQ sources? They should be wiser now.
>
> Marc
>
> Hi Marc,
>
> I tried to send the note below to David Stutzer, but he must have left or changed his email address; maybe you can answer my questions or know how I may contact him.
>
> In 2000, he sent us some US brightness data and we are still using it for our "urban adjustment" scheme (us-lights.txt).
>
> Recently we had to deal with attacks from blogger McIntyre of hockey stick fame, and there is some pressure on us to make our whole temperature analysis available over the web - input files and source codes. I don't know whether we'll really go that far, but to be ready, I'd like to ask you the following questions:
>
> Were these data ever updated ?

Can the file "us-lights.txt" or a similar file be downloaded from the web ? In case the answer is no, would it be ok, if we made that file available from our web site ?

Sorry to have to bother you with this nonsense.

Cheers,

Reto

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Fwd: <no subject>
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 31 Aug 2007 11:42:25 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, Reto Ruedy <cdrar@giss.nasa.gov>

Jim,

The only factual inaccuracy is the years affected by the discontinuity:
So I would change Jack's sentence that starts with:

"The flaw affected only ..."

I would replace the end "and only after 2000" by "and only for years 2000-present"

or something like that.

Reto

On Fri, 2007-08-31 at 10:05 -0500, James Hansen wrote:

> Sorry, I think that you were not on the distribution. Jim
>
> ---------- Forwarded message ----------
> From: James Hansen <jhansen@giss.nasa.gov>
> Date: Aug 26, 2007 7:15 PM
> Subject: Re: <no subject>
> To: Jack Kaye <jack.a.kaye@nasa.gov>
> Cc: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov>, Leslie McCarthy <lnolan@giss.nasa.gov>, "Freilich, Michael H. (HQ-DK000)" <michael.h.freilich@nasa.gov>, Ellen Cohen <ellen.cohen-1@nasa.gov>
>
> Hi Jack,
>
> Just back It seems to me that the paragraph is basically o.k., but I would like Reto and Makiko to verify that.
>
> The "ranking" of individual years is something that we try to discourage media from pursuing, especially for an area the size of contiguous U.S. (2% of globe). There are too many years that are statistically indistinguishable.
>
> Also, the results change as new stations are added to the record or old ones are changed/corrected. Indeed, WMO and/or NOAA add previously unreported data every month and often correct errors or make adjustments to some data from prior months. In general each month the data set that we obtain differs (slightly) in the past, as well as having the addition of another month. So it is like an election in which you continually have recounts and absentee ballots added. In the case of an election, change of order makes a difference, as you have to have a winner. But in the temperature analysis, in the case of razor thin differences, these flips have no physical significance (only an impact is when an eagle-eyed contrarian finds something that can be used as fodder for whatever ends they have).
>
> Jim

On 8/23/07, Jack Kaye <jack.a.kaye@nasa.gov > wrote:

Jim ◆ in attempting to close the loop on this so we can deal

with the legislative action, I wanted to see if we could come up with any more quantitative information. I looked at the longer text that you had the link to ("The Real Deal: Usufruct & the Gorilla).

First, it appears that the "XX July 2007" in your message below should be 7 August 2007.

In terms of 1934 vis a vis the more recent years, the key data I see from your text that may be worth citing are:

◆ The four warmest US years on record were 1921, 1934, 1998,

and 2006

◆ The mean temperature anomaly in the US was 1.25 deg C in

1934 and 1.13 deg C in 2006, which is the ~ 1/10 degree difference between the two, which is smaller than the uncertainty in the actual numbers.

◆ In 1934 the US was warm relative to much of the rest of the

word, while in 2006 the world was much warmer.

If these points are enough, we can try to get them into a short paragraph. How about this?

The computer program used by Dr. Hansen to create the temperature record is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen in a peer-reviewed publication from 2001. The flaw affected temperatures only in the United States and only after 2000. As explained by Dr. Hansen in an e-mail sent out on August 10, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Thomas Karl of NOAA's National Climatic Data Center and his colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Dr. Hansen's computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and his computer program picked up the data for these same stations reported in the World Meteorological Organization's GHCN (Global Historical Climatology Network) data stream.

Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS computer program on 7 August 2007 with a note to that effect made on the GISS Temperature web page. Based on the current analysis, the four warmest years in the US record were 1921, 1934, 1998, and 2006. The mean temperature anomaly in the US was approximately 1/10 degree C greater in 1934 (1.25 degrees) than in 2006 (1.13 degrees); this

difference is less than the uncertainty in the calculated mean. One point worth noting is that in 1934, the US was warm relative to much of the rest of the world, while in 2006, the warmth of the US was accompanied by that of much of the globe.

Would you be okay with this? If not, do you have suggestions? I don't know that we'd need much more than this!

On 8/15/07 6:18 AM, "Jack Kaye" <jack.a.kaye@nasa.gov> wrote:

Jim ◆ thanks for sending. I'll watch for next

installment. I appreciate the prompt turnaround (2:27 AM ◆ hope you're getting some rest). - Jack

On 8/15/07 2:27 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:

Jack, I am writing something, with figures, which I will send later today. Here are a few relevant paragraphs for now. Jim

The computer program is rerun every month as new meteorological station data and new satellite sea surface temperature data are reported. The program produces a global surface temperature field using an analysis scheme documented by Hansen et al. (2001). The flaw affected temperatures only in the United States and only after 2000.

[As explained in the e-mail sent out last week, one of the improvements made in the 2001 analysis was to use the USHCN (U.S. Historical Climatology Network) station records in the United States as adjusted by Tom Karl and NOAA colleagues, who used available descriptive data to correct for effects of station moves, changes in time-of-day at which measurements were made, etc. Our computer program was written with the assumption that this (adjusted) USHCN data would also be used in future years. Unfortunately, adjusted USHCN data have not been available in near-real-time, and our program picked up the data for these same stations reported in the WMO GHCN (Global Historical Climatology Network) data stream. Because the GHCN data do not include the NOAA adjustments, this introduced a discontinuity in the temperature anomalies in 2000. This discontinuity can be removed by comparing USHCH and GHCN records just before 2000, and this correction was made to the GISS

computer program on XX July 2007 with a note to that effect made on the GISTEMP web page.]

How big an error did this flaw cause? That is shown by the before and after results in Figure 1. The effect on the global temperature record is invisible. The effect on U.S. average temperature is about 0.15°C beginning in 2000. Does this change have any affect whatever on the global warming issue? Certainly not, as discussed below.

:On 8/14/07, Jack Kaye <jack.a.kaye@nasa.gov> wrote:

Jim ◆ thanks for sending this to me.

We have an action to respond to a Congressional question about this. Can you provide us with a relatively straightforward answer (with some #) that we can transmit? I don't think we need anything extensive or complex, but a relatively brief (but quantitative) "just the facts" summary would help. As a backup, it may be good if we could have some # in case we get asked for more detail (e.g., list of top 20 warm years, time series of global T for last 15 years and also for 1934 ± 5 years).

Don is on travel, but may be checking e-mail.

Time scale is, of course, asap! - Jack

On 8/14/07 2:52 AM, "James Hansen" <jhansen@giss.nasa.gov> wrote:

Don,

These are some desperate characters trying to make a mountain out of a mole hill. I presume that my note "A Light on Upstairs?" should have clarified things for scientists (Leslie, you can send it to anybody), but perhaps a few of additional comments are warranted.

In summary: There was indeed a flaw* in our program that automatically updates our global temperature analysis each month. The flaw affected only 2001 and later, and only the United States.

The flaw, even when present (in 2001-2006, in the U.S.) was minor, at most a few thousandths of a degree on global mean and about 0.15C in the U.S. Contrary to some press reports, this did not change the rankings of global temperatures. Nor did it change our rankings of the top few years in the U.S., with 1934 the warmest in our record and 1998 practically tied with it. The claim in the news reports that suddenly 1934 has become the warmest U.S. year is nonsense. As you can see in our 2001 paper, 1934 was the warmest in our record then, and it is now, with and without the programming flaw. We also point out in that paper that the differences among these different years are negligible, less than the uncertainty.

Finally, if one wished to be scientific, instead of trying to confuse the public, as is the obvious intend of these critics/contrarians, one should note that single year temperatures for an area as small as the U.S . (2% of the globe) are extremely noisy. If one instead looks at the temperature averaged over several years, it is apparent that the U.S. as well as the world has been quite warm in the past decade. Indeed, averaged over several years, the U.S. is at its warmest point in the period of record, about 0.8C warmer than at the beginning of the 20th century, similar to the global mean warming.

Jim

*The flaw was caused by the fact that in our 2001 update of our analysis we included Tom Karl's adjustments to USHCN station records, which they based on metadata available station by station for station moves, time-of-observation bias, etc. However, the only

available data stream that included these stations after 2000 was the GHCN (WMO), which did not include the Karl adjustments, a fact not recognized by our program, thus causing a discontinuity in these station records. Because the effect was small, we did not notice it. This programming flaw is easily corrected by adding the NOAA/NCDC adjustment near the end of the record to the 2001-2007 data, and it has been so corrected.

On 8/13/07, Donald Anderson <donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> > wrote:

Jim:
FYI
Any comment?
Don

Don Anderson
3G84
Modeling, Analysis and Prediction (MAP)
Earth Science Division
Science Mission Directorate
NASA HQ
Washington, DC,
20546-0001
202-358-1432 Fax:
x2770
email:
Donald.Anderson-1@nasa.gov <mailto:Donald.Anderson-1@nasa.gov>

------ Forwarded Message
From: "Volz, Stephen M. (HQ-DK000)" < svolz@nasa.gov <mailto:svolz@nasa.gov> >
Date: Mon, 13 Aug 2007 12:01:06 -0400
To: "Anderson, Donald (HQ-DK000)" < donald.anderson-1@nasa.gov <mailto:donald.anderson-1@nasa.gov> >, "Maring, Hal (HQ-DK000)" < hal.maring@nasa.gov <mailto:hal.maring@nasa.gov> >
Cc: "Kaye, Jack A. (HQ-DK000)" < jack.a.kaye@nasa.gov <mailto:jack.a.kaye@nasa.gov> >, "Brown, Dwayne C. (HQ-NB060)" < dwayne.c.brown@nasa.gov>
Conversation: <no

subject>
Subject: <no subject>

Don et al.,

I saw this on the NASA news summary today.

> Columnist Notes Changes In NASA's Temperature Data. In an op-ed for the Washington Times (8/13, 87K) Mark Steyn, a syndicated columnist who is also senior contributing editor for Hollinger Inc. Publications, senior North American columnist for Britain's Telegraph Group, North American editor for the Spectator, writes, " Something rather odd happened the other day. If you go to NASA's Web site and look at the " U.S. surface air temperature" rankings for the Lower 48 states, you might notice something has changed.
>
> Then again, you might not. They're not issuing any press releases about it. But they have quietly revised their All-Time Hit Parade for

U.S. temperatures.

The "hottest year on record" is no longer 1998, but 1934. Another alleged swelterer, the year 2001, has now dropped out of the Top 10 altogether, and most of the rest of the 21st century ◆

2000, 2002, 2003, 2004 ◆

plummeted even lower down the Hot 100. In fact, every supposedly hot year from the '90s and Oughts has had its temperature rating reduced. Four of America's Top 10 hottest years turn out to be from the 1930s, that notorious decade when we all drove around in huge SUVs with the air-conditioning on full-blast. If climate change is, as Al Gore says, the most important issue anyone's ever faced in the history of anything ever, then Franklin Roosevelt didn't have a word to say about it. And yet we survived.

So why is 1998 no longer America's record-breaker? Because a very diligent fellow called Steve McIntyre of climateaudit.com <http://climateaudit.com/> <http://climateaudit.com/> labored long and hard to prove there was a bug in NASA's handling of the raw data. He then notified the scientists responsible, and received an acknowledgment that the mistake was an "oversight" that would be corrected in the next "data refresh." The reply was almost as cool as the revised chart listings.

Who is this

man who understands American climate data so much better than the National Aeronautics and Space Administration? Well, he's not even America: He's Canadian. Just another immigrant doing the jobs Americans won't do, even when they're federal public servants with unlimited budgets? No. Mr. McIntyre lives in Toronto. But the data smelled wrong to him, he found the error, and NASA has now corrected its findings ◆ albeit without the fanfare that accompanied the hottest-year-on-record hysteria of almost a decade ago. Sunlight may be the best disinfectant, but, when it comes to global warming, the experts prefer to stick the thermometer where the sun don't shine."

And he goes on and on....

Does anyone know what this guy is talking about? I checked the NASA website http://www.nasa.gov/centers/goddard/news/topstory/2006/2006_warm.html, dated Feb 8, 2007 and it shows the top five years as: 2005 (1st), 1998, 2002, 2003, and 2006.

Stephen Volz, Ph.D.
Program Executive,
Science Mission Directorate
Suite 3B74
NASA Headquarters

"Try not. Do, or do not. There is no try."

-

Yoda, Jedi Master

------ End of Forwarded Message

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Assoc. Director for Research
Fax: 202-358-3172
Earth Science Division
E-mail: Jack.A.Kaye@nasa.gov
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Washington, DC 20546

Phone: 202-358-2559
Fax: 202-358-3172
E-mail:

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: GISTEMP data reproduction request]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Tue, 04 Sep 2007 12:07:27 -0400
To: jhansen@giss.nasa.gov, makis@giss.nasa.gov, klo@giss.nasa.gov, rschmunk@giss.nasa.gov, gavin@giss.nasa.gov

Hi Jim,

This refers to a web site belonging to a person in England - at first sight, his analyses of GHCN data seem strangely naive, some inspired by McIntyre's blogs.

Anything we should do about this inquiry ?

Reto

-------- Forwarded Message --------
From: Michael Cassin <michael@cassin.name>
To: Reto Ruedy <rruedy@giss.nasa.gov>
Subject: GISTEMP data reproduction request
Date: Tue, 4 Sep 2007 15:11:31 +0100

Hello Dr Ruedy,

My name is Michael Cassin. I'm developing some technology for hosting online datasets and statistical analysis, and would like to inquire about the possibility of reproducing the GISS temperature data. I realise it is available through the web interface, but would like to know if there is an ftp, or other, site where the entire dataset can be downloaded. I'd also like to be sure of any copyright issues.

Apologies for the direct intrusion into your inbox. I would understand if you redirect my inquiry.

Best regards,

Mike Cassin
Managing Director
Stikir Ltd

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Program release
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 06 Sep 2007 12:56:47 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Reto Ruedy <cdrar@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Darnell Cain <dcain@giss.nasa.gov>, klo@giss.nasa.gov

Jim,

I understand the need to make the programs and input files available. But to put out an unusable product (though it works on our machines, based on the directory structures, compilers, etc. of the various machines) that has to be repeatedly changed may be counterproductive. I wish I had another week - or at least a weekend where I could work without interruption.

(1) As far as list of stations we remove is concerned, most are removed or remain unused automatically because their records are too short to have sufficient overlap with the dominating stations. Do you only want a list of those stations that are explicitly removed at the beginning of the process due to their strange data ?

(2) Corrections: We correct 2 stations (St.Helena and Lihue) and use USHCN instead of the corresponding GHCN data. The rest is dropping parts or all of a record (=cleaning). Hence:

"no corrections"="not correcting the 2 stations, not using USHCN, no cleaning",

"current"="2 corrections+USHCN+cleaning",

"no cleaning"="2 corrections+USHCN".

Are any 2 of these 3 options what you need ?

I guess (3) can be done by Makiko, if not let me know.

Reto

On Thu, 2007-09-06 at 10:28 -0500, James Hansen wrote:

> Reto, Robert,
>
> We are getting more and more questions as to why we will not release our temperature data analysis programs. We need to make these available this week, by the end of the day tomorrow.
>
> Can you put these in a place where they are accessible, with an address that I will put in an e-mail? This will be as part of an e-mail that also provides access to the revised "Peak Oil" paper.
>
> It probably should include a simple listing of the function of each subroutine. We can note that a simplified version of the programs will be available in the future.
>
> Finally we need:
> (1) a list of the stations that we remove, and
> (2) line graph of global mean land-ocean temperature index with and without these stations removed (the draft that you gave me has No Corrections, Current Web, No Cleaning -- what do these three

categories mean? I believe what we want is two curves, one that uses the data without alterations and one for what we present to the public (3) maps showing the results with and without our changes -- the four maps that you made for 1880-2006 are fine, but the maps need to be made with Makiko's program/color scale etc. Also I would like to add two maps: delete the two maps on the left (which show the effect of St Helena/Lihue) and add the result when South America and Africa are replace with no data, the objective being to see how these continents contribute to the global mean temperature change. Clearly the data in those continents is pretty lousy, but how much difference does that make for the global mean?

Jim

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Program release
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 06 Sep 2007 15:44:05 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: Makiko Sato <makis@giss.nasa.gov>, "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, klo@giss.nasa.gov, rruedy@giss.nasa.gov

Jim,

I prepared a documentation file (preliminary version attached) that divides the process into a preliminary and another 5 steps - Jay's programs are in step 1 and Robert is working on it (he has trouble compiling one of the C programs; also the order in which stations are combined seems dependent on the release of the data base system); I'm currently working on step 2 and Ken is working backwards from step 6 - hope to get through by tomorrow and combine it into a semi-coherent package.

A week seems a reasonable estimate to clean up what was missed - a total rewrite of Jay's programs however might easily take longer.

Reto

On Thu, 2007-09-06 at 13:41 -0500, James Hansen wrote:

> Yes, the perception is, unfortunately, what counts now. We will have to release them with the very strong recommendation that anyone wishing to actually use them should wait until they are cleaned up, with the estimate that this will take another week or so (is that the appropriate estimate to give?).
>
> Yes, the list should be those stations explicitly removed, since that is perhaps the most subjective thing that we do to the data, other than the procedures for analysis that are described in the papers.
>
> The "current" result is one of the results that we want to illustrate. For the other, I was thinking of excluding the correction of two stations and not dropping the stations that are on the list of removed stations (some of them might get removed by the analysis program, but that is o.k., it is using objective criteria). If you do not have this, but have something that includes it, for example also replacing USHCN of "current" with WMO, that should be all right.
>
> The objective is too show that our partially subjective choice of stations to remove does not significantly alter the global warming that we obtain. A second objective is to show that the admittedly large problems with African and South American data does not significantly alter the inferred global warming (this second objective just requires Makiko to omit those areas).
>
> Jim
>
> On 9/6/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>
> > Jim,
> >
> > I understand the need to make the programs and input files available.
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>
> Jim
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

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GISS Temperature Analysis
==========

History

GISS started in the 1970s to use 1-D models to study climate forcings and their potential impact. These studies were continued using the GISS 3-D climate model. However, comparisons with observed data were not easily possible, because long term temperature records (1880-present) are missing for large parts of the world and estimates for the global trends were not available in the literature. GISS started to compute such estimates on the basis of the available data using MCDW reports and NOAA near real-time data. GISS established that useful estimates can be obtained for the global temperature changes during the past century with a careful investigation of the margin of error of such estimates.

Fortunately, the labor-intensive effort of collecting reports from various sources and of evaluating and cleaning those reports was taken over by at team of experts at NOAA (GHCN/USHCN):

GISS now concentrates on converting these data to anomalies and combining them into a gridded data set to get time series of large regional and global means.

Sources

Basic data set: GHCN - ftp://ftp.ncdc.noaa.gov/pub/data/ghcn/v2
v2.mean.Z (data file)

v2.temperature.inv.Z (station information file)

For Hohenpeissenberg - http://members.lycos.nl/ErrenWijlens/co2/t_hohenpeissenberg_200306.txt
complete record for this rural station
(thanks to Hans Erren who reported it to GISS on July 16, 2003)

For US: USHCN - http://cdiac.ornl.gov/ftp/ushcn_monthly
hcn_doe_mean_data.Z
station_inventory

For Antarctica: SCAR - http://www.antarctica.ac.uk/met/READER/surface/stationpt.html
http://www.antarctica.ac.uk/met/READER/temperature.html
http://www.antarctica.ac.uk/met/READER/aws/awspt.html

SCAR contains some stations that are not part of GHCN - only those data are used that are marked by SCAR as final

USHCN are a subset of GHCN, but those data were adjusted for various recording and protocol errors and discontinuities; this set is particularly relevant if studies of US temperatures are made. These corrections, obviously, contribute little to the GLOBAL temperature trend (since the data for the remaining 98% of the world are not as carefully investigated)

Step 0 : Merging of sources (do_comb_step0.sh)

GHCN contains reports from several sources, so there often are multiple records for the same location. Occasionally, a single record was divided up by NOAA into several pieces, e.g. if suspicious discontinuities were discovered.

USHCN and SCAR contain single source reports but in different formats/units and with different or no identification numbers. For USHCN, the table "ushcn.tbl" gives a translation key, for SCAR we extended the WMO number if it existed or created a new ID if it did not (2 cases). SCAR stations are treated as new sources.

Adding SCAR data to GHCN:
The tables were reformatted and the data rescaled to fit the GHCN format; the new stations were added to the inventory file. The site temperature.html has not been updated for over a year; we found and corrected a few typos in that file.

Replacing USHCN-unmodified by USHCN-corrected data:
The reports were converted from F to C and reformatted; data marked as being filled in using interpolation were removed. USHCN-IDs were replaced by the corresponding GHCN-ID. The latest common 15 years for each station were used to compare corrected and uncorrected data. The offset obtained in that way was subtracted from the corrected USHCN reports to match any new incoming GHCN reports for that station (GHCN reports are updated monthly, in the past, USHCN data lagged by 2-5 years).

Filling in missing data for Hohenpeissenberg:
This is a version of a GHCN report with missing data filled in, so it is used to fill the gaps of the corresponding GHCN series.

Result: v2.meanz

Step 1 : Simplifications, elimination of dubious records, 2 adjustments (do_comb_step1.sh)

The various sources at a single location are combined into one record, if possible, using a method similar to the reference station method. The shift

is determined in this case on series of estimated annual means.

Non-overlapping records are viewed as a single record, unless this would result introducing a discontinuity; in the documented case of St.Helena the discontinuity is eliminated by adding 1C to the early part.

Some unphysical looking segments were eliminated after manual inspection of unusual looking annual mean graphs and comparing them to the corresponding graphs of all neighboring stations. (As a test, the analysis was done including all these parts - the global mean series was not affected)

After noticing an unusual warming trend in Hawaii, closer investigation showed its origin to be in the Lihue record; it had a discontinuity around 1950 not present in any neighboring station. Based on those data, we added 0.8C to the part before the discontinuity.

Step 2 : Splitting into zonal sections and homogeneization (do_comb_step2.sh)

Since the gridding program was written about 30 years ago for what now would be viewed as tiny machines, the data were divided into 6 zonal sections. We plan to reprogram the gridding and analysis section of our procedure to eliminate this division.

The goal of the homogeneization effort is to avoid any impact (warming or cooling) of the changing environment that some stations experienced by changing the global trend of any non-rural station to match the global trend of their rural neighbors. If no such neighbors exist, the station is completely dropped, if the rural records are shorter, part of the non-rural record is dropped.

Step 3 : Gridding and computation of zonal means (do_comb_step3.sh)

A grid of 8000 grid boxes of equal area is used. Time series are changed to series of anomalies. For each grid box, the stations within that grid box and also any station within 1200km of the center of that box are combined using the reference station method.

A similar method is also used to find a series of anomalies for 80 regions consisting of 100 boxes from the series for those boxes, and again to find the series for 6 latitudinal zones from those regional series, and finally to find the hemispheric and global series from the zonal series.

It should be noted that the base period for any of these anomalies is not necessarily the same for each grid box, region, zone. This is irrelevant when computing maps of trends; however, when used to compute anomalies, we always have to subtract the base period series from the series of the selected time period to get the proper anomaly map.

Step 4 : Regrid sea surface temperature anomalies

Sources: http://www.hadobs.org HadISST1: 1870-present
ftp.emc.ncep.noaa.gov cmb/sst/oimonth_v2 Reynolds 11/1981-present

For both sources, we compute the anomalies with respect to 1982-1991, use the Hadley data for the period 1880-11/1981 and Reynolds data for 12/1981-present. These data are replicated on the 8000-box equal-area grid in order to be able to use the same utilities for surface and ocean data. Areas covered by sea ice are masked out (a fixed mask is used for all times).

Step 5 : Computation of LOTI zonal means

The same method as in step3 is used, except that for a particular grid box the anomaly or trend is computed twice, first based on surface data, then

based on ocean data. Depending on the location of the grid box, one or the other is used with priority given to the surface data, if available.

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Step 4 : Regrid sea surface temperature anomalies

Sources: http://www.hadobs.org HadISST1: 1870-present
ftp.emc.ncep.noaa.gov cmb/sst/oimonth_v2 Reynolds 11/1981-present

For both sources, we compute the anomalies with respect to 1982-1991, use the Hadley data for the period 1880-11/1981 and Reynolds data for 12/1981-present. These data are replicated on the 8000-box equal-area grid in order to be able to use the same utilities for surface and ocean data. Areas covered by sea ice are masked out (a fixed mask is used for all times).

Step 5 : Computation of LOTI zonal means

The same method as in step3 is used, except that for a particular grid box the anomaly or trend is computed twice, first based on surface data, then based on ocean data. Depending on the location of the grid box, one or the other is used with priority given to the surface data, if available.

Subject: Re: Program release
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 06 Sep 2007 16:26:41 -0400
To: James Hansen <jhansen@giss.nasa.gov>

If it's only the short "history" section, you could just email me your version; I also can read word documents. Either way is fine with me.

Reto

On Thu, 2007-09-06 at 15:19 -0500, James Hansen wrote:
Reto's write-up is excellent. I only want to re-write the introductory couple of paragraphs. How should I do that? This is not a format that I have worked in -- can/should I copy and put in Word??
Jim

On 9/6/07, Robert B. Schmunk <Robert.B.Schmunk@nasa.gov> wrote:

> On Sep 6, 2007, at 15:44, Reto Ruedy wrote:
>
> > Jay's
> > programs are in step 1 and Robert is working on it (he has trouble
> > compiling one of the C programs; also the order in which stations are
> > combined seems dependent on the release of the data base system)
>
> The C programs mentioned are actually compiled C "extensions" which are used by the Python programs. I was able to install a copy of these extensions on Web2 in the spring two years ago when we managed to transfer the various GISTEMP CGI scripts from Web1 to Web2, but unfortunately I do not have any record of what special hoops I had to jump through in order to do so.
>
> As for the database system, the Python programs save the station data in binary files using Berkeley DB. The version of BDB on the machine Jay and on the machine Web2 is different.
>
> I have been able to get a Python script which combines station data records to run on Web2, but there are some differences in the resulting output files when compared with the files generated on Jay. I am currently trying to figure out what might be the cause of that, and whether it might be a result of
> the difference in BDB versions.
>
> rbs
>
> --
> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
> 10025

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: US brightness index
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 12 Sep 2007 16:07:08 -0400
To: jhansen@giss.nasa.gov, rschmunk@giss.nasa.gov
CC: makis@giss.nasa.gov, klo@giss.nasa.gov

Jim,

Steve is still having fun with step0, but eventually he'll find that we did not document how we determined the US brightness numbers we use in our homogeneization.

Checking that step, I noticed that the program that reads Stutzer's file is machine dependent, because some stations lie on the edge between 2 cells. If in these cases I use the brighter of the 2 cells the choices become more robust. 8 of the about 400 rural stations would become peri-urban, and since we don't distinguish between urban and peri-urban stations, these would be the only effective changes.

I looked at the US annual mean series in both cases: they differ by less than .003 C except between 1880 and 1900; in 1900 the difference new-old is -0.005C, in 1880 +.014C .

I would prefer to use add the newer version into the sources. I'd also like to take the text out of the tar file and make it available separately - this is probably the only thing that any normal person might be interested in. The big brightness file should probably also be stored separately for the convenience of those who would just want to look at the programs.

By the way, Steve's newest "discovery" about the Detroit file is simply due to our switch from USHCN-1999 to USHCN-2005.

He also claims (not in any email, just in his blogs - so it may not be true), USHCN-2006 is also available; I know that NOAA has it but I can't find it on the USHCN site.

Reto

Subject: Re: Program release
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 07 Sep 2007 13:33:53 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>, Ken Lo <klo@giss.nasa.gov>

Robert,

I combined all source codes according to the steps I outlined in my documentation and put it on jay:/gcm/GHCN/GISTEMP_sources . Please take a look at it - I tested most pieces. Maybe you find a better way to organize the thing.

The documentation "gistemp.txt" is not the final version. The whole thing is only about 5 MB.

Reto

On Thu, 2007-09-06 at 22:16 -0400, Robert B. Schmunk wrote:

> Reto,
>
> Earlier I noted:
>
> > I have been able to get a Python script which combines station data records to run on Web2, but there are some differences in the resulting output files when compared with the files generated on Jay. I am currently trying to figure out what might be the cause of that, and whether it might be a result of the difference in BDB versions.
>
> It turns out that the difference is in the version of Python installed on the computer. More specifically, it's the Python hashing function.
>
> There are a couple places in comb_records.py where the records.items() command is used to get the separate records from the hash (or what Python calls a "dict") for a station that has multiple records. It is characteristic of a hash/dict that the items could be in any order, and it is up to the programmer to do his own sorting if it is required that the items be processed in a predictable order.
>
> So because the hash function in Python 1.5 and 2.2 differs, when comb_records.py examines a station with multiple records and decides which records to use, the order in which those multiple records are assessed may vary and that can affect the output file.
>
> I created a modified version of comb_records.py which always works through multiple records for a station in a predictable order (0, 1, 2, etc.). When that program was run on Jay and on Web2, the resulting output files were the same.
>
> A similar hash ordering issue probably applies to the comb_proces.py program.
>
> rbs

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025
--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: US mean data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 12 Sep 2007 21:13:38 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: jhansen@giss.nasa.gov

Makiko,

Fortunately, Ken Bell was able to fix my email.

Yes, this is the correct file, and I think it should be changed to be consistent with the rest of the data.

Reto

On Wed, 2007-09-12 at 19:55 -0400, Makiko Sato wrote:

> Jim, Reto,
>
> Since Reto switched to USHCN data through 2005 this month, I was curious how it changed. (Reto showed me some graphs, but I wanted to see them myself.) Since I didn't get annTs_Map180x90xxx data, I went to athena:/clima1/Steve and took a look at US_ann.lpl.neat. Is this with the new data set, Reto? Now I see 1934 = 1.24 and 1998 = 1.24, tie!
>
> What should I do? Switch to this data on http://data.giss.nasa.gov/gistemp/graphs/? Or leave it as last month data (with USHCN through 1999)? Since I wrote on the top of the page, we extended our use of USHCN to 2005, I'd better switch to new one, but then again these crazy people may say, now we have 1934 and 1998 in tie. Which is true? Why did we change? etc, etc.
>
> Makiko

Subject: Re: US mean data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 12 Sep 2007 22:07:17 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: jhansen@giss.nasa.gov

Makiko, Jim,

USHCN did a lot of cleaning since they gave us their data in 2000; in particular, much of the period 1880-1940 was changed or discarded for many stations - I mentioned that all the USHCN data we discarded were no longer there or were changed to look perfectly normal; also Steve's substantial Detroit Lakes changes were made sometime between 1999 and this year.

So it was much more than just adding the 6 extra years.

Reto

On Wed, 2007-09-12 at 21:44 -0400, Makiko Sato wrote:
> Reto,
>
> I am glad that Ken Bell could fix your e-mail problem.
>
> I thought about showing both US means; USHCN through 1999 and USHCN through 2005. T(1934) = 1.25 and T(1998) = 1.23 before and T(1934) = T(1998) = 1.24 now. But Jim wonders (and so I do) why using USHCN for 2000-2005 changes the mean temperature before 2000. After we understand why, I will show both data.
>
> Thank you,
> Makiko
>
> On 9/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Makiko,
> >
> > Fortunately, Ken Bell was able to fix my email.
> >
> > Yes, this is the correct file, and I think it should be changed to be consistent with the rest of the data.
> >
> > Reto
> >
> > On Wed, 2007-09-12 at 19:55 -0400, Makiko Sato wrote:
> > > Jim, Reto,
> > >
> > > Since Reto switched to USHCN data through 2005 this month, I was curious how it changed. (Reto showed me some graphs, but I wanted to see them myself.) Since I didn't get annTs_Map180x90xxx data, I went to athena:/clima1/Steve and took a look at US_ann.lpl.neat. Is this with the new data set, Reto? Now I see 1934 = 1.24 and 1998 = 1.24, tie!
> > >
> > > What should I do? Switch to this data on http://data.giss.nasa.gov/gistemp/graphs/? Or leave it as last month [illegible] through 1999)? Since I wrote on the top of the page, we extended our use of USHCN to 2005, I'd better switch to new one, but then again these crazy people may say, now we have 1934 and 1998 in tie. Which is true? Why did we change? etc, etc.

Makiko

--

Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Steve and USHCN-1999 -> USHCN-2005
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 12 Sep 2007 22:17:39 -0400
To: jhansen@giss.nasa.gov
CC: Makiko Sato <makis@giss.nasa.gov>

Jim,

Since answering Steve's question puts the blame for the changes on USHCN, and since he will probably demand again that we give him that old USHCN file, we should probably contact Tom Karl or Jay Lawrimore to find out how they want us to handle that situation.

I'll gladly write to them and would also ask about whether they actually made the 2006 USHCN data public as Steve keeps claiming.

Reto

Subject: Re: US mean data
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 12 Sep 2007 23:01:29 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: jhansen@giss.nasa.gov

On Wed, 2007-09-12 at 22:23 -0400, Makiko Sato wrote:
> Reto,
>
> Yes, now I remeber that you had told me that USHCN data were cleaned more, dropping many stations which Jim had eliminated. I was just forgetting about it when I talked with Jim on the phone just before I left work. I am sorry.
>
> Now my question is that
> when you were using USHCN through 1999 and switching to GHCN from 2000, you matched the GHCN and USHCN means for 1990-1999, right?
> now when you use USHCN through 2005 and use GHCN for 2006 and 2007, do you match the GHCN and USHCN means for 1996-2005?

Yes I did - Reto

> It is getting late, so I hope you go home soon and I will ask you tomorrow.
>
> Good night,
> Makiko
>
> On 9/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > Makiko, Jim,
> >
> > USHCN did a lot of cleaning since they gave us their data in 2000; in particular, much of the period 1880-1940 was changed or discarded for many stations - I mentioned that all the USHCN data we discarded were no longer there or were changed to look perfectly normal; also Steve's substantial Detroit Lakes changes were made sometime between 1999 and this year.
> >
> > So it was much more than just adding the 6 extra years.
> >
> > Reto
> >
> > On Wed, 2007-09-12 at 21:44 -0400, Makiko Sato wrote:
> > > Reto,
> > >
> > > I am glad that Ken Bell could fix your e-mail problem,
> > >
> > > I thought about showing both US means; USHCN through 1999 and USHCN through 2005. T(1934) = 1.25 and T(1998) = 1.23 before and T(1934) = T(1998) = 1.24 now. But Jim wonders (and so I do) why using USHCN for 2000-2005 changes the mean temperature before 2000. After we understand why, I will show both data.
> > >
> > > Thank you,
> > > Makiko
> > >
> > > On 9/12/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> > > > Makiko,

Fortunately, Ken Bell was able to fix my email.

Yes, this is the correct file, and I think it should be changed to be consistent with the rest of the data.

Reto

On Wed, 2007-09-12 at 19:55 -0400, Makiko Sato wrote:

> Jim, Reto,
>
> Since Reto switched to USHCN data through 2005 this month, I was curious how it changed. (Reto showed me some graphs, but I wanted to see them myself.) Since I didn't get annTs_Map180x90xxx data, I went to athena:/clima1/Steve and took a look at US_ann.lpl.neat. Is this with the new data set, Reto? Now I see 1934 = 1.24 and 1998 = 1.24, tie!
>
> What should I do? Switch to this data on http://data.giss.nasa.gov/gistemp/graphs/? Or leave it as last month data (with USHCN through 1999)? Since I wrote on the top of the page, we extended our use of USHCN to 2005, I'd better switch to new one, but then again these crazy people may say, now we have 1934 and 1998 in tie. Which is true? Why did we change? etc, etc.
>
> Makiko

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re:USHCN temperatures
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 13 Sep 2007 09:37:28 -0400
To: Jay Lawrimore <Jay.Lawrimore@noaa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, cdiac@ornl.gov

Hi Jay,

Recently, we replaced - for our temperature analysis - the USHCN data you gave us back in 2000 (last stage before filling in missing data) by the file "hcn_doe_mean_data" (ending in 2005). Needless to say, this had little impact on our global analysis.

Recently, we have been approached by Steve McIntyre and his fans; in particular, he now is questioning some differences that originate in differences between the two USHCN files. He keeps insisting on seeing all our programs and input files, and I'm sure he bothered you - or whoever is in charge of USHCN now - with similar requests.

Four questions:

1 - Would it be ok with you if we made the old USHCN file publicly available ?

2 - Steve claims that USHCN data are publicly available to the end of 2006 - is that true and if so, where can I find it ?

3 - One person invoked FOIA to demand the release of the original temperature files that were used in 1999 as basis of one of our papers. Since you probably got similar requests, how do you respond ? Do you really keep for ever any files that were used in any of your papers ?

4 - Is using "hcn_doe_mean_data" disregarding any filler for missing data (marked M) a legitimate use of that file, and is this equivalent to using the SHAP version ?

Reto

Subject: Re: USHCN temperatures
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Thu, 13 Sep 2007 11:41:44 -0400
To: Jay Lawrimore <Jay.Lawrimore@noaa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, cdiac@ornl.gov, Claude N Williams <Claude.N.Williams@noaa.gov>, Matthew Menne <Matthew.Menne@noaa.gov>, David Easterling <David.Easterling@noaa.gov>, Thomas C Peterson <Thomas.C.Peterson@noaa.gov>

Hi Jay,

Thanks for your quick and helpful response - starting from USHCN's home page, I ended up at http://cdiac.ornl.gov/ftp/ushcn_monthly where the data are cut off at the end of 2005.

Reto

On Thu, 2007-09-13 at 11:05 -0400, Jay Lawrimore wrote:

> Hi Reto,
>
> It is ok with us if you make the old USHCN file publicly available. For the most recent data we have online you can go to ftp://ftp.ncdc.noaa.gov/pub/data/ushcn/ . That has been updated through October 2006.
>
> Regarding old versions of files - Claude Williams recently responded to a request for USHCN data from the 1980s. He attempted to reproduce the data but I'm not sure he was successful. To answer your question - we do our best to provide the data requested but we have not archived all data files along the way.
>
> I will ask Claude if he can respond to your 4th question.
>
> Jay
>
> Reto Ruedy wrote the following on 9/13/2007 9:37 AM:
>
> > Hi Jay,
> >
> > Recently, we replaced - for our temperature analysis - the USHCN data you gave us back in 2000 (last stage before filling in missing data) by the file "hcn_doe_mean_data" (ending in 2005). Needless to say, this had little impact on our global analysis.
> >
> > Recently, we have been approached by Steve McIntyre and his fans; in particular, he now is questioning some differences that originate in differences between the two USHCN files. He keeps insisting on seeing all our programs and input files, and I'm sure he bothered you - or whoever is in charge of USHCN now - with similar requests.
> >
> > Four questions:
> >
> > 1 - Would it be ok with you if we made the old USHCN file publicly available ?
> >
> > 2 - Steve claims that USHCN data are publicly available to the end of 2006 - is that true and if so, where can I find it ?
> >
> > 3 - One person invoked FOIA to demand the release of the original temperature files that were used in 1999 as basis of one of our papers. Since you probably got similar requests, how do you respond ? Do you really keep for ever any files that were used in any of your papers ?

4 - Is using "hcn_doe_mean_data" disregarding any filler for missing data (marked M) a legitimate use of that file, and is this equivalent to using the SHAP version ?

Reto

--
Jay Lawrimore

Chief, Climate Monitoring Branch

NOAA's National Climatic Data Center

Scientific Services Division

Veach-Baley Federal Building

151 Patton Avenue, Asheville, NC 28801-5001

Ph. (828) 271-4750, Fax (828) 271-4328

Jay.Lawrimore@noaa.gov

Visit the NCDC Monitoring Site:

http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Gistemp Changes
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Fri, 14 Sep 2007 18:12:27 -0400
To: Steve McIntyre <stephen.mcintyre@utoronto.ca>
CC: "James E. Hansen" <jhansen@giss.nasa.gov>

Dear Sir,

As indicated in the description of our input files, we switched from the old year 2000 version of USHCN to the current version. The differences you noticed reflect corrections that were made by USHCN within the last six years.

Reto A. Ruedy

On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:

> Dear Sirs, I notice that you've changed the historical data for some US stations since Sep 7, 2007. In particular, I noticed that temperatures for Detroit Lakes MN in the early part of the century were reduced by nearly 0.5 deg C. These changes are subsequent to your changes in August 2007 for the changing versions. To my knowledge, there is no explanation for this most recent change and I was wondering what the reason is.
>
> Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes MN and Aug 25, 2007 version.
>
> Thank you for your attention.
>
> Regards,
>
> Steve McIntyre

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: "graphs" page
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Sat, 15 Sep 2007 13:15:46 -0400
To: Makiko Sato <makis@giss.nasa.gov>
CC: "Robert B. Schmunk" <rschmunk@giss.nasa.gov>, jhansen@giss.nasa.gov

Jim, Makiko,

Since the changes mainly affect this page and the station data page, this is the proper place to put this section. We might want to add a link to it on the station data page.

On the station data page, we might also want to include the caveat, that only the raw GHCN data are suitable for local studies; the other stages are only useful to compute regional anomalies and trends for regions larger than 300,000 square miles.

It might be good to add in the "what's new" section to a) the corresponding graph as in c).

The section after "what's new" might profit from being titled "How does 2007 compare to the 2 hottest years?"

Reto

On Sat, 2007-09-15 at 05:35 -0400, Makiko Sato wrote:

> Reto, Robert,
>
> Jim and I worked yesterday evening on "What's New" on the graphs page. If there are some corrections/suggestions, please let me know. It is pointing to a "Updates to Analysis" section on temperature home page which doesn't exist until Jim gets back next Wed. or Thurs. , but he said it is OK.
>
> Makiko

Subject: Re: Temp Page
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Sun, 16 Sep 2007 14:45:03 -0400
To: "Robert B. Schmunk" <Robert.B.Schmunk@nasa.gov>
CC: James Hansen <jhansen@giss.nasa.gov>, Makiko Sato <makis@giss.nasa.gov>

Robert,

There is also a typo in the September 2007 item in the sentence that starts: "Our quality control...."

... and all stations removed by it our available in a list.

should be replaced by

... and all station records removed by it are available in a list.
or better
... and a list of all station records removed by it is provided.

I also would replace "stations" by "station records" in the first (and also in the last) sentence of that item (since NOAA only removed parts - mostly the beginnings - of a station record, not the whole thing). Then, of course, the second sentence has to be adjusted also: "The records removed ... so we no longer remove any USHCN records."

In addition, it is not true that USHCN removed "all" the records that we used to remove, some of these records were changed, some stayed as they were. Sorry, that was my mistake. So here is my suggestion for that item:

September 2007: The ... through 2005). In this newer version, NOAA removed or corrected a number of station records before year 2000. Since these changes included most of the records that failed our quality control checks, we no longer remove any USHCN records. *) Our quality control is still applied to the non-USHCN stations and is described by Hansen et al.(2001). A list of all station records removed by it is provided. The effect ... *)

(No changes in the first and the last sentence)

*) On second thought, the September 2007 item starts out with the NOAA-1999 -> NOAA-2005 switch. Rather than describing the effect of that change, the rest of the item deals with our quality control, programs I would be hard pressed to even find, we have not used them in years. If I remember correctly, these programs flagged as suspicious many stations; then we looked at the annual or monthly plots of these stations and picked the data to be discarded.

So I would stop after "we no longer remove any USHCN records". By the way, the effect of that switch was a slight increase in the US trend (.04 C for the 1920-2006 change based on linear trends: .21C -> .25C for the 1920-2006 period), the global trends were not affected.

Reto

On Sun, 2007-09-16 at 05:12 -0400, James Hansen wrote:

> Great. It is not so long as I feared, let's use it this way. In the August 2003 item put "station data" where it presently says "station". In the August 2007 item replace the sentence "We provide here..." with Graphs showing the effect of this change on U.S. and global

temperature are available here.

I think that you can put them up temporarily with the direct links to the Columbia web page, and later replace that to a link to just the graphs and discussion of the graphs extracted from the Columbia web page and placed in a GISS repository. That specific discussion of graphs should also note that discussion of the significance of the changes is included on the Columbia web site giving the location (and perhaps also the RealClimate location?) of the web site (it can just be the web site, without going directly to the articles on GISTEMP). I understand your concern, but to ignore the misinformation is also a concern.

On 9/16/07, Robert B. Schmunk <Robert.B.Schmunk@nasa.gov> wrote:

> A preliminary re-working of the GISTEMP homepage is at
>
> http://data.giss.nasa.gov/gistemp/index_new.html
>
> Although very long, it could go up as-is in place of the current GISTEMP homepage except that the links to the Columbia webpage stuff are not there yet (i.e ., in the second para of the Aug 2007 update comments).
>
> I am very concerned about linking directly to the PDFs on the Columbia webpage, whether here or on the graphs page as Makiko has already done, because it is transparent to the user that the PDFs are located on Jim's personal webpage. All they know is that they click on a link on a NASA webpage and they get a PDF. Hence the inattentive user (which would be most of them) would think the PDF is a NASA document.
>
> So on Sunday I will try to make a pass through the PDFs and extract out the material which can be posted on a NASA webpage. I would assume this would mostly mean toning down or eliminating language re: skeptics and denialists.
>
> Also, Makiko, I cleaned up the HTML of the "what's new" you put at the start of the graphs webpage. Is the "(a)", "(b)", "(c)" notation necessary? I left it there, but can't see that it needs to be there.
>
> rbs
>
> On Sep 15, 2007, at 14:53, Makiko Sato wrote:
>
> > Reto,
> >
> > It means that Robert will put them on the GISS temperature front page
> > and you will check if that is the way Jim wants?
> >
> > Makiko
> >

> On 9/15/07, James Hansen <jhansen@giss.nasa.gov> wrote:
>> With suggested editing below, I believe that this should allow a
>> complete
>> version of the new front page to GISTEMP. I think that you should
>> go ahead
>> and replace it without waiting for me to get back from Denmark. Jim
>>
>> On 9/15/07, Reto Ruedy < rruedy@giss.nasa.gov> wrote:
>>> Jim,
>>>
>>> In the description of step2 (homogeneization) "urban" should be
>>> replaced
>>> by "urban and peri-urban" or "non-rural" or we may add a sentence to
>>> indicate that "small-town" stations are adjusted the same way as
>>> urban
>>> stations. Although it is mentioned at the end of the previous
>>> section,
>>> it should probably be repeated here to avoid accusations of
>>> inconsistency.
>>
>> let's use: "urban and peri-urban (i.e., other than rural)"
>> that makes an unambiguous definition of our categories
>>> April 2006 modification:
>>> Looking at maps based on ocean data alone, we noticed that the
>>> HadISST
>>> data (1880-1981) extended to regions containing sea ice, whereas the
>>> NOAA data (1982-present) did not. In order to get a more
>>> consistent time
>>> series, the HadISST part was restricted to the same ice-free
>>> regions as
>>> the NOAA data. Since the temperature of water containing ice is
>>> always
>>> near the freezing point, including data from such regions tends to
>>> artificially dampen any heating or cooling trend.
>> April 2006 modification: HadISST ocean temperatures are now used
>> only for
>> regions that are identified as ice-free in both the NOAA and HadISST
>> records. This change effects a small number of gridboxes in which
>> HadISST
>> has sea ice while NOAA has open water. The prior approach damped
>> temperature change at these gridboxes because of specification of
>> a fixed
>> temperature in sea ice regions. The new approach still yields a
>> conservative estimate of surface air temperature change, as

>> surface air
>> temperature usually changes markedly when sea ice is replaced by
>> open water
>> or vice versa. Because of the small area of these gridboxes the
>> effect on
>> global temperature change was negligible.
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>>>> list of
>>>> changes to the analysis should be included, but perhaps just the
>>>> first
>> line
>>>> or so then... to a link??
>>>>
>>>> Jim
>>> --
>>> Reto Ruedy <rruedy@giss.nasa.gov>
>>>
>>
>>
>

--
Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
NASA Goddard Institute for Space Studies, 2880 Broadway, New York, NY
10025

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: Gistemp Changes
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 17 Sep 2007 09:54:07 -0400
To: "James E. Hansen" <jhansen@giss.nasa.gov>, rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov
CC: gavin@giss.nasa.gov

Jim,

We could fix this by changing "magnitude of the effect" by "relevance of the effect" which is obviously what you meant. Not that this will prevent him from further maligning us.

Reto

On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> I see that you have decided to report the change in methodology as requested in my previous email. While you should have reported the change in methodology when it was made, it is better late than never.
>
> In your new webpage, you state: " This August 2007 change received international attention via discussions on various blogs and repetition by some other media, with no graphs provided to show the magnitude of the effect." This is incorrect and I request that you correct this statement. On Aug 6, 2007, at Climate Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were provided to estimate the magnitude of the effect. The first graph shown below estimated the impact on the U.S. temperature history at a little more than 0.15 deg C. Despite having no access to your source code, this proved to be an accurate estimate.
>
> The next graph shown below shows the distribution of changes over the 1221 U.S. stations, which are very substantial in individual cases. Despite your professed concern for illustrating the impact of changes, you did not yourself provide any graph to show the magnitude of the changes on individual stations, nor did you even provide explicit notice on your webpage that any changes had been made.
>
> Would you please correct the incorrect information on your webpage. This request is made pursuant to the Data Quality Act.
> Yours truly,
>
> Stephen McIntyre
>
> ---
>
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre

Cc: James E. Hansen
Subject: Re: Gistemp Changes

Dear Sir,

As indicated in the description of our input files, we switched from the old year 2000 version of USHCN to the current version. The differences you noticed reflect corrections that were made by USHCN within the last six years.

Reto A. Ruedy

On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:

> Dear Sirs, I notice that you've changed the historical data for some US stations since Sep 7, 2007. In particular, I noticed that temperatures for Detroit Lakes MN in the early part of the century were reduced by nearly 0.5 deg C. These changes are subsequent to your
> changes in August 2007 for the changing versions. To my knowledge, there is no explanation for this most recent change and I was wondering what the reason is.
>
> Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes MN
> and Aug 25, 2007 version.
>
> Thank you for your attention.
>
> Regards,
>
> Steve McIntyre

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Monday, September 17, 2007 11:15 AM
To: Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Temp Page

Robert,

In updates/200708.html please replace "2001" by "2000". I can't do it due to permission settings and Steve is already busy nitpicking our web site.

Reto

On Sun, 2007-09-16 at 18:07 -0400, Robert B. Schmunk wrote:
> The revised homepage is in place. This:
>
> * includes Reto's suggested edits.
>
> * links to a new webpage on the August 2007. This is just a slight
> rewording of the "Light Upstairs" post, but I thought it important
> to get it on the GISS website, because there are references in the
> homepage text to the figures in this post.
>
> * links to Jim's website re: Usufruct & the Gorilla, but I
> explicitly identify this as going to Jim's personal webpage.
> When time permits, we should try to shift applicable content
> from this post in an update page on the GISS website.
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> * modifies the webpage layout so that the block of six image links
> are now a strip down the side of the page. I did this to get the
> start of the text up at the top of the webpage, and perhaps get
> more people to actually read some of it.
>
> rbs
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> On Sep 16, 2007, at 14:45, Reto Ruedy wrote:
>
> > Robert,
> >
> > There is also a typo in the September 2007 item in the sentence that
> > starts: "Our quality control...."
> >
> > ... and all stations removed by it our available in a list
> >
> > should be replaced by
> >

> >> In the August 2007 item replace the sentence "We provide here..."
> >> with
> >> Graphs showing the effect of this change on U.S. and global
> >> temperature are available here.
> >>
> >> I think that you can put them up temporarily with the direct links
> >> to the Columbia web page, and later replace that to a link to just
> >> the graphs and discussion of the graphs extracted from the Columbia
> >> web page and placed in a GISS repository. That specific discussion
> >> of graphs should also note that discussion of the significance of
> >> the changes is included on the Columbia web site giving the
> >> location (and perhaps also the RealClimate location?) of the web
> >> site (it can just be the web site, without going directly to the articles on GISTEMP).
> >> I understand your concern, but to ignore the misinformation is also
> >> a concern.
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> >> On 9/16/07, Robert B. Schmunk <Robert.B.Schmunk@nasa.gov> wrote:
> >>
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> >> A preliminary re-working of the GISTEMP homepage is at
> >>
> >> http://data.giss.nasa.gov/gistemp/index_new.html
> >>
> >> Although very long, it could go up as-is in place of the
> >> current GISTEMP homepage except that the links to the
> >> Columbia webpage stuff are not there yet (i.e ., in the
> >> second para of the Aug 2007 update comments).
> >>
> >> I am very concerned about linking directly to the PDFs on
> >> the Columbia webpage, whether here or on the graphs page as
> >> Makiko has already done, because it is transparent to the
> >> user that the PDFs are located on Jim's personal webpage.
> >> All they know is that they click on a link on a NASA webpage
> >> and they get a PDF. Hence the inattentive user (which would
> >> be most of them) would think the PDF is a NASA document.
> >>
> >> So on Sunday I will try to make a pass through the PDFs
> >> and extract out the material which can be posted on a
> >> NASA webpage. I would assume this would mostly mean toning
> >> down or eliminating language re: skeptics and denialists.
> >>
> >> Also, Makiko, I cleaned up the HTML of the "what's new" you
> >> put at the start of the graphs webpage. Is the "(a)", "(b)",
> >> "(c)" notation necessary? I left it there, but can't see that
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> >>>>> In the description of step2 (homogeneization) "urban"
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> >>>>> by "urban and peri-urban" or "non-rural" or we may add a
> >> sentence to
> >>>>> indicate that "small-town" stations are adjusted the same
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> >>>>> stations. Although it is mentioned at the end of the
> >> previous
> >>>>> section,
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> >>>> let's use: "urban and peri-urban (i.e., other than rural)"
> >>>> that makes an unambiguous definition of our categories
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> >>>>> Looking at maps based on ocean data alone, we noticed that
> >> the
> >>>>> HadISST
> >>>>> data (1880-1981) extended to regions containing sea ice,
> >> whereas the
> >>>>> NOAA data (1982-present) did not. In order to get a more
> >>>>> consistent time series, the HadISST part was restricted to the

> >>>>> same
> >> ice-free
> >>>>> regions as
> >>>>> the NOAA data. Since the temperature of water containing
> >> ice is
> >>>>> always
> >>>>> near the freezing point, including data from such regions
> >> tends to
> >>>>> artificially dampen any heating or cooling trend.
> >>>> April 2006 modification: HadISST ocean temperatures are
> >> now used
> >>>> only for
> >>>> regions that are identified as ice-free in both the NOAA
> >> and HadISST
> >>>> records. This change effects a small number of gridboxes
> >> in which
> >>>> HadISST
> >>>> has sea ice while NOAA has open water. The prior approach
> >> damped
> >>>> temperature change at these gridboxes because of
> >> specification of
> >>>> a fixed
> >>>> temperature in sea ice regions. The new approach still
> >> yields a
> >>>> conservative estimate of surface air temperature change, as
> >>>> surface air temperature usually changes markedly when sea ice is
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> >> Robert B. Schmunk, Robert.B.Schmunk@nasa.gov
> >> NASA Goddard Institute for Space Studies, 2880 Broadway, New
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> for Space Studies, 2880 Broadway, New York, NY
> 10025
-
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Monday, September 17, 2007 11:26 AM
To: Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: [Fwd: Re: Temp Page]

Of course I meant: replace "jumps in 2001" by "jumps in 2000", the other "2001"s are fine.

Reto

—— Forwarded Message ——
From: Reto Ruedy <rruedy@giss.nasa.gov>
Reply-To: rruedy@giss.nasa.gov
To: Robert B. Schmunk <Robert.B.Schmunk@nasa.gov>
Subject: Re: Temp Page
Date: Mon, 17 Sep 2007 11:14:43 -0400

Robert,

In updates/200708.html please replace "2001" by "2000". I can't do it due to permission settings and Steve is already busy nitpicking our web site.

Reto

On Sun, 2007-09-16 at 18:07 -0400, Robert B. Schmunk wrote:
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> On Sep 16, 2007, at 14:45, Reto Ruedy wrote:
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> > Robert,
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> > There is also a typo in the September 2007 item in the sentence that
> > starts: "Our quality control...."
> >
> > ... and all stations removed by it our available in a list.
> >
> > should be replaced by
> >
> > ... and all station records removed by it are available in a list.
> > or better
> > ... and a list of all station records removed by it is provided.
> >
> > I also would replace "stations" by "station records" in the first
> > (and also in the last) sentence of that item (since NOAA only
> > removed parts - mostly the beginnings - of a station record, not the
> > whole thing).
> > Then,
> > of course, the second sentence has to be adjusted also: "The records
> > removed ... so we no longer remove any USHCN records."
> >
> > In addition, it is not true that USHCN removed "all" the records
> > that we used to remove, some of these records were changed, some
> > stayed as they were. Sorry, that was my mistake. So here is my
> > suggestion for that
> > item:
> >
> > September 2007: The ... through 2005). In this newer version, NOAA
> > removed or corrected a number of station records before year 2000.
> > Since
> > these changes included most of the records that failed our quality
> > control checks, we no longer remove any USHCN records. *) Our
> > quality control is still applied to the non-USHCN stations and is
> > described by Hansen et al.(2001). A list of all station records
> > removed by it is provided. The effect ... *)
> >
> > (No changes in the first and the last sentence)
> >
> > *) On second thought, the September 2007 item starts out with the
> > NOAA-1999 -> NOAA-2005 switch. Rather than describing the effect of
> > that change, the rest of the item deals with our quality control,
> > programs I would be hard pressed to even find, we have not used them
> > in years.
> > If I
> > remember correctly, these programs flagged as suspicious many
> > stations; then we looked at the annual or monthly plots of these
> > stations and picked the data to be discarded.
> >
> > So I would stop after "we no longer remove any USHCN records". By
> > the way, the effect of that switch was a slight increase in the US

> > trend
> > (.04 C for the 1920-2006 change based on linear trends: .21C -> .
> > 25C for
> > the 1920-2006 period), the global trends were not affected.
> >
> > Reto
> >
> > On Sun, 2007-09-16 at 05:12 -0400, James Hansen wrote:
> >> Great. It is not so long as I feared, let's use it this way. In
> >> the August 2003 item put "station data" where it presently says
> >> "station".
> >> In the August 2007 item replace the sentence "We provide here..."
> >> with
> >> Graphs showing the effect of this change on U.S. and global
> >> temperature are available here.
> >>
> >> I think that you can put them up temporarily with the direct links
> >> to the Columbia web page, and later replace that to a link to just
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> >> All they know is that they click on a link on a NASA webpage
> >> and they get a PDF. Hence the inattentive user (which would
> >> be most of them) would think the PDF is a NASA document.
> >>
> >> So on Sunday I will try to make a pass through the PDFs
> >> [redacted]
> >> NASA webpage. I would assume this would mostly mean toning
> >> down or eliminating language re: skeptics and denialists.

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> >> Also, Makiko, I cleaned up the HTML of the "what's new" you
> >> put at the start of the graphs webpage. Is the "(a)", "(b)",
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> for Space Studies, 2880 Broadway, New York, NY
> 10025
–
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: Re: Gistemp Changes
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 17 Sep 2007 13:01:00 -0400
To: James Hansen <jhansen@giss.nasa.gov>
CC: rschmunk@giss.nasa.gov, cdmss@giss.nasa.gov, gavin@giss.nasa.gov

Jim,

I made the change in the text. Do you think, that a direct response to McIntyre is needed ? Something like:

Thanks for bringing to our attention that the term "magnitude of the effect" might be misunderstood as "size" rather than "relevance", magnitude having both meanings. We clarified our formulation correspondingly.

Reto

On Mon, 2007-09-17 at 18:33 +0200, James Hansen wrote:
> Yes, you can make that change. Of course what I meant was in the places that mattered, Wall Street Journal, etc. there was no proper indication of the magnitude or relevance of the effect. Jim
>
> On 9/17/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
>> Jim,
>>
>> We could fix this by changing "magnitude of the effect" by "relevance of
>> the effect" which is obviously what you meant. Not that this will
>> prevent him from further maligning us.
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>> Reto
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>> On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:
>> > Dear Sirs,
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>> > I see that you have decided to report the change in methodology as
>> > requested in my previous email. While you should have reported the
>> > change in methodology when it was made, it is better late than never.
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>> > In your new webpage, you state: " This August 2007 change received
>> > international attention via discussions on various blogs and
>> > repetition by some other media, with no graphs provided to show the
>> > magnitude of the effect." This is incorrect and I request that you
>> > correct this statement. On Aug 6, 2007, at Climate
>> > Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were
>> > provided to estimate the magnitude of the effect. The first graph
>> > shown below estimated the impact on the U.S. temperature
>> history at a
>> > little more than 0.15 deg C. Despite having no access to your source

> code, this proved to be an accurate estimate.
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>
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>
> The next graph shown below shows the distribution of changes over the
> 1221 U.S. stations, which are very substantial in individual cases.
> Despite your professed concern for illustrating the impact of changes,
> you did not yourself provide any graph to show the magnitude of the
> changes on individual stations, nor did you even provide explicit
> notice on your webpage that any changes had been made.
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> Would you please correct the incorrect information on your webpage.
> This request is made pursuant to the Data Quality Act.
> Yours truly,
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> Stephen McIntyre
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> -----Original Message-----
> From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre
> Cc: James E. Hansen
> Subject: Re: Gistemp Changes
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> Dear Sir,
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> As indicated in the description of our input files, we switched from
> the old year 2000 version of USHCN to the current version. The
> differences you noticed reflect corrections that were made by USHCN
> within the last six years.
>
>
> Reto A. Ruedy
>
>
> On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:
> > Dear Sirs, I notice that you've changed the historical data for some
> > US stations since Sep 7, 2007. In particular, I noticed that
> > temperatures for Detroit Lakes MN in the early part of the century
> > were reduced by nearly 0.5 deg C. These changes are subsequent to

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> > changes in August 2007 for the changing versions. To my knowledge,
> > there is no explanation for this most recent change and I was
> > wondering what the reason is.
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> > Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes
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> > and Aug 25, 2007 version.
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> > Thank you for your attention.
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> > Regards,
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> --
> Reto Ruedy <rruedy@giss.nasa.gov>
>
>
--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

Subject: RE: Gistemp Changes
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Mon, 17 Sep 2007 13:21:32 -0400
To: Steve McIntyre <stephen.mcintyre@utoronto.ca>
CC: "James E. Hansen" <jhansen@giss.nasa.gov>

Dear Sir,

Thanks for bringing to our attention that the term "magnitude of effect" might be interpreted as "size" rather than "relevance", our obvious intent. We clarified our formulation correspondingly.

On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:

> Dear Sirs,
>
> I see that you have decided to report the change in methodology as requested in my previous email. While you should have reported the change in methodology when it was made, it is better late than never.
>
> In your new webpage, you state: " This August 2007 change received international attention via discussions on various blogs and repetition by some other media, with no graphs provided to show the magnitude of the effect." This is incorrect and I request that you correct this statement. On Aug 6, 2007, at Climate Audit, http://www.climateaudit.org/?p=1868 , the two graphs below were provided to estimate the magnitude of the effect. The first graph shown below estimated the impact on the U.S. temperature history at a little more than 0.15 deg C. Despite having no access to your source code, this proved to be an accurate estimate.
>
> The next graph shown below shows the distribution of changes over the 1221 U.S. stations, which are very substantial in individual cases. Despite your professed concern for illustrating the impact of changes, you did not yourself provide any graph to show the magnitude of the changes on individual stations, nor did you even provide explicit notice on your webpage that any changes had been made.
>
> Would you please correct the incorrect information on your webpage. This request is made pursuant to the Data Quality Act.
> Yours truly,
>
> Stephen McIntyre
>
> -----Original Message-----
> [redacted]
> Sent: Friday, September 14, 2007 6:12 PM
> To: Steve McIntyre
> Cc: James E. Hansen

Subject: Re: Gistemp Changes

Dear Sir,

As indicated in the description of our input files, we switched from the old year 2000 version of USHCN to the current version. The differences you noticed reflect corrections that were made by USHCN within the last six years.

Reto A. Ruedy

On Wed, 2007-09-12 at 15:38 -0400, Steve McIntyre wrote:

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> changes in August 2007 for the changing versions. To my knowledge, there is no explanation for this most recent change and I was wondering what the reason is.
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> Figure 1. Difference between Sep 10, 2007 version of Detroit Lakes MN
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> Thank you for your attention.
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> Regards,
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> Steve McIntyre

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Monday, September 17, 2007 4:05 PM
To: Travis, Larry D. (GISS-6110)
Cc: Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: [Fwd: RE: Gistemp Changes]

Larry,

Steve now invokes the infamous "data quality act" to a comment Jim made on our temperature website, and cc'd his complaint to infoquality@nasa.giv (should probably be nasa.gov). Would you be able to find out what if anything we should do against this inane accusation.

His graphs do no such thing as show the "relevance of the effect"; he just shows the correction (without error bars) rather than the corrected and uncorrected curves as we do.

Reto

—— Forwarded Message ——
From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
To: rruedy@giss.nasa.gov, infoquality@nasa.giv, James E. Hansen <jhansen@giss.nasa.gov>
Subject: RE: Gistemp Changes
Date: Mon, 17 Sep 2007 13:48:34 -0400

Dear Sirs,

Your revised webpage http://data.giss.nasa.gov/gistemp/ contains the following incorrect statement: "This August 2007 change received international attention via discussions on various blogs and repetition by some other media, with no graphs provided to show the relevance of the effect."

This is incorrect and I request that you correct this statement. As I advised you previously, on Aug 6, 2007, at Climate Audit,
http://www.climateaudit.org/?p=1868 , the two graphs below showed the relevance of the effect to U.S. temperature history and to U.S.
stations.

The first graph shown below showed that the error was relevant to U.S.
temperature history - a topic specifically considered in Hansen et al 2001.

The NASA website provides individual station histories, as well as U.S.
and global estimates. The graph below showed the error was relevant to individual U.S. station histories.

The claim that "no graphs provided to show the relevance of the effect"
remains incorrect. Once again, please correct the false statement on the NASA webpage
http://data.giss.nasa.gov/gistemp/ . This request is made under the Data Quality Act.

Yours truly,

Steve McIntyre

—Original Message—
From: Reto Ruedy [mailto:rruedy@giss.nasa.gov]
Sent: Monday, September 17, 2007 1:22 PM
To: Steve McIntyre
Cc: James E. Hansen
Subject: RE: Gistemp Changes

Dear Sir,

Thanks for bringing to our attention that the term "magnitude of effect"
might be interpreted as "size" rather than "relevance", our obvious intent. We clarified our formulation
correspondingly.

On Mon, 2007-09-17 at 09:05 -0400, Steve McIntyre wrote:
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> I see that you have decided to report the change in methodology as
> requested in my previous email. While you should have reported the
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> The next graph shown below shows the distribution of changes over the

> 1221 U.S. stations, which are very substantial in individual cases.
> Despite your professed concern for illustrating the impact of changes,
> you did not yourself provide any graph to show the magnitude of the
> changes on individual stations, nor did you even provide explicit
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> To: Steve McIntyre
> Cc: James E. Hansen
> Subject: Re: Gistemp Changes
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Reto Ruedy <rruedy@giss.nasa.gov>

Subject: [Fwd: RE: Gistemp Changes]
From: Reto Ruedy <rruedy@giss.nasa.gov>
Date: Wed, 19 Sep 2007 16:25:16 -0400
To: Mark.S.Hess@nasa.gov
CC: infoquality@nasa.gov, ltravis@giss.nasa.gov, makis@giss.nasa.gov, jhansen@giss.nasa.gov, gavin@giss.nasa.gov, rschmunk@giss.nasa.gov

Dear Mark,

In addition to abusing FOIA, these people now also start to invoke the Data Quality Act. Larry Travis suggested I contact you.

Can you advise us whether there is anything we have to do in response to the email below because of that act ? In case you don't know, who should we ask ? Is there a department at nasa with the email address infoquality@nasa.gov ? (I assume there is no "nasa.giv")

As far as this case is concerned, the man either has no idea or pretends to have no idea that "relevance" and "non-zero size" are not identical. Rather than showing corrected and uncorrected graph (which are basically indistinguishable), he showed the difference of the 2 curves (which makes any estimate of the relevancy of the correction impossible). So we are sure that his claim is baseless.

Sincerely,

Reto

-------- Forwarded Message --------
From: Steve McIntyre <stephen.mcintyre@utoronto.ca>
To: rruedy@giss.nasa.gov, infoquality@nasa.giv, James E. Hansen <jhansen@giss.nasa.gov>
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Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

--
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Thursday, September 27, 2007 9:21 AM
To:
Subject: Re: Missing station data

Actually, I had some backups and it seems to fine now.

Thanks for your understanding,

Reto A Ruedy

On Thu, 2007-09-27 at 09:15 -0400, wrote:
> Dear Dr. Reudy,
>
> Thanks for responding. That kind of thing happens to the best of us!
> I will check the site later today.
>
> Regards,
>
>
> Reto Ruedy wrote:
> > Dear
> >
> > Thanks for notifying me about that problem. I verified that
> > something is off.
> >
> > We have not made any changes since Sep. 11; unfortunately, trying to
> > fix the problem this morning, I managed to erase some vital data
> > sets. We may have to wait for our web master to come in to fix the problem.
> >
> > Hopefully that can be done sometime today.
> >
> > Sorry for the inconvenience,
> >
> > Reto A Ruedy
> >
> > On Thu, 2007-09-27 at 08:29 -0400, wrote:
> >
> >> Dear Dr. Ruedy,
> >>
> >> I wanted to bring the following to your attention.
> >>
> >> The individual records for station ID 22220674000 (there are seven
> >> of
> >> them) are available from the GISS website, but the combined record
> >> for the same station is absent.
> >>
> >> The individual and combined records for station ID 63826063001 are
> >> not available from the GISS website today, but were available three days ago.
> >>

> >> Kind regards,
> >>
> >>
> >>
> >>
> >>
> >>
>
–
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Thursday, September 27. 2007 9:50 AM
To:
Subject: Re: Missing station data

Dear Mr.

Ostrov Dikson (22220674000) seems to work fine again.

However, I can't believe that you ever could display Kronstadt (63826063001) since the only data GHCN has for that station are from 1844-1875 - and we only use data starting in 1880. Do you remember the name of the station that you displayed ?

Reto A Ruedy

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>
> The individual records for station ID 22220674000 (there are seven of
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> The individual and combined records for station ID 63826063001 are not
> available from the GISS website today, but were available three days ago.
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> Kind regards,
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From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Friday, September 28, 2007 12:59 PM
To: Hansen, James E. (GISS-6110)
Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

Jim,

I dealt with him yesterday since some station graphs no longer appeared (probably as a consequence of some errors in the program used to automatically create the station data tables - a program he subsequently corrected). I had to clean out the work directory to make the utilities function again.

His inquiry and response definitely lacked McIntyre's haughty and aggressive tone. But we did not get into any discussions.

As far as his comments are concerned, I don't exactly remember how much freedom we gave Jay to design the procedure to combine station records at the same location and how much testing he did.

In the bias procedure used to combine anomaly series, we use a separate bias for each month, Jay uses a single annual bias to combine temperature series at the same location, but we require a shorter overlap period in that case (4 years vs 20 years - maybe that's why we made the switch from monthly to annual bias).

I don't remember why Jay ranked stations with respect to their sources and always starts with MCDW-data if such data are available rather than using length only - maybe for reasons of continuity (before using GHCN, MCDW was our main source).

I doubt very much that the specific way to handle multiple records matters as far as US or global mean series are concerned. That our method introduces no systematic bias is confirmed by the fact that our and NOAA's totally different approach gives virtually the same answers.

Reto

On Fri, 2007-09-28 at 12:12 -0400, James Hansen wrote:
> Reto,
> Have you had any dealings with this person? He seems more rational
> than the other.
> Jim
>
> ——— Forwarded message ———
> From: @charter.net>
> Date: Sep 27, 2007 7:49 PM
> Subject: Preliminary examination of HL87 bias method as applied to
> individual station records
> To: James.E.Hansen@nasa.gov
>
>
> Dear Dr. Hansen,

>
> I understand you are extremely busy, but I wanted to pass along some
> analysis I have been doing on your method of combining individual
> temperature records for a single station using the "bias method", as
> described primarily in HL87.
>
> My preliminary analysis of the method seems to show that it introduces
> an "artificial cooling" to station records before 1987. This cooling
> seems to be introduced primarily as a result of two things: the order
> selected for combining records and the fact that annual and quarterly
> temperatures are estimated prior to combining those records.
>
> In HL87 you acknowledge: "One potential disadvantage of the method we
> have described for combining station records is that the results, in
> principle, depend on the ordering of the station records." However,
> the discussion that ensues is around different stations rather than
> different records for the same station. I am finding that, when using
> this method to combine records from a single station, the ordering of
> records has far more influence than expected.
>
> The descriptions I have seen for ordering stations in your papers
> indicate that they are ordered from greatest number of years of
> temperature record to the least number of years. In practice what I
> find is that if an MCDW (Monthly Climatic Data for the World) record
> exists, it is used first, even though it is usually the shortest
> record (when it exists. it also the latest record for a station).
> Because it is the first record in the order, it is never biased, but
> all others preceding it chronologically are biased. The overlap period
> with preceding records seems to be somewhat short - usually four
> years, sometimes five. Although HL87 discusses the combination of
> stations within a gridcell, the implication is that the same
> methodology is used for combining station records. This would mean the
> minimum overlap period should be 20 years.
>
> In reading HL87 I would have expected the period of overlap to be
> calculated using the months of overlap, which represents the finest
> grain of measurement in the record GISS uses. Instead, I have
> determined that the annual record is used, which is the coarsest grain
> of measurement in the record used by GISS. If the monthly records were
> complete, this would not be an issue. In practice I find that they are
> usually not complete, so an estimated annual average is often used
> when determining overlap periods. In fact, the first year in a record
> is almost always an estimate. This is because the records begin in
> January, but the average is calculated from December to November.
> Thus, the "missing" December value must be estimated. The process of
> estimating annual averages prior to combining individual records for a
> station is not one that I have found documented thus far.
>
> As chance would have it, the process of combining records using MCDW
> previous records, and the fact that many annual averages are
> estimated, seems to yield a clear cooling bias to pre-1991 temperature

> records. An example can be seen here with the Russian records.
>
>
>
> While I understand the rationale behind using the bias method to
> combine station records within a grid cell, I don't fully understand
> why it is used to combine separate records for an individual station.
> As you note in your 1999 paper "in the majority of cases the
> overlapping portions of the two records are identical, representing
> the same measurements that have made their way into more than one data
> set." This indicates that a simple average of the records is
> appropriate.
>
> Why is the bias method better than the following?:
> - For each station examine all monthly records for the station
> simultaneously
> - If no valid measurement exists in any record for a given month,
> record NA (or equivalent)
> - If exactly one valid measurement exists for a given month, use that
> value
> - If more than one valid measurement exists for a given month, use the
> average of all valid measurements
>
> After all records have been combined in this manner, estimate missing
> annual values where possible.
>
> I appreciate your thoughts on this.
>
>
>
>
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>
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Reto Ruedy <rruedy@giss.nasa.gov>

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Cc: Reto Ruedy; Lo, Kwok-Wai (GSFC-611.0)[SGT INC]; Sato, Makiko (GSFC-611.0)[GODDARD SPACE FLIGHT CENTER]; Schmunk, Robert B. (GSFC-611.0)[SIGMA SPACE CORP]
Subject: Re: Fwd: Preliminary examination of HL87 bias method as applied to individual station records

In our gridding program, we combine the records strictly according to length of records. Closeness might be an alternative, but a station near the center of a subgrid box with a 20-year record might create a short time series for that subbox based on a single station.

In Jay's case, closeness is moot, since all records refer to the same location.

Reto

On Fri, 2007-09-28 at 13:06 -0400, James Hansen wrote:
> Hmm - it seems that I didn't check very closely what Jay was doing.
> Some of the choices do not seem to be the way that we intended them to
> be. it looks like we had better fix those and see what difference it
> makes. I thought that we started with the longest record? There
> could be a rationale for starting with the closest record, and, if it
> was shown that it didn't matter, perhaps there is a rationale for
> something different. Jim
>
> On 9/28/07, Reto Ruedy <rruedy@giss.nasa.gov> wrote:
> Jim,
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> I dealt with him yesterday since some station graphs no longer
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> > records has far more influence than expected.
> >
> > The descriptions I have seen for ordering stations in your
> > papers
> > indicate that they are ordered from greatest number of years
> > of
> > temperature record to the least number of years. In practice
> > what I
> > find is that if an MCDW (Monthly Climatic Data for the
> > World) record
> > exists, it is used first, even though it is usually the
> > shortest
> > record (when it exists. it also the latest record for a
> > station).
> > Because it is the first record in the order, it is never
> > biased, but
> > all others preceding it chronologically are biased. The
> > overlap period
> > with preceding records seems to be somewhat short - usually
> > four
> > years, sometimes five. Although HL87 discusses the
> > combination of
> > stations within a gridcell, the implication is that the same
> > methodology is used for combining station records. This
> > would mean the
> > minimum overlap period should be 10 years.
> >
> > In reading HL87 I would have expected the period of overlap

> to be
> > calculated using the months of overlap, which represents the
> finest
> > grain of measurement in the record GISS uses. Instead, I
> have
> > determined that the annual record is used, which is the
> coarsest grain
> > of measurement in the record used by GISS. If the monthly
> records were
> > complete, this would not be an issue. In practice I find
> that they are
> > usually not complete, so an estimated annual average is
> often used
> > when determining overlap periods. In fact, the first year in
> a record
> > is almost always an estimate. This is because the records
> begin in
> > January, but the average is calculated from December to
> November.
> > Thus, the "missing" December value must be estimated. The
> process of
> > estimating annual averages prior to combining individual
> records for a
> > station is not one that I have found documented thus far.
> >
> > As chance would have it, the process of combining records
> using MCDW
> > records first, the short overlap period between MCDW records
> and
> > previous records, and the fact that many annual averages are
> > estimated, seems to yield a clear cooling bias to pre-1991
> temperature
> > records. An example can be seen here with the Russian
> records.
> >
> >
> >
> > While I understand the rationale behind using the bias
> method to
> > combine station records within a grid cell, I don't fully
> understand
> > why it is used to combine separate records for an individual
> station.
> > As you note in your 1999 paper "in the majority of cases the
> > overlapping portions of the two records are identical,
> representing
> > the same measurements that have made their way into more
> than one data
> > set." This indicates that a simple average of the records is
> > appropriate.
> >
> > Why is the bias method better than the following?:

> > - For each station examine all monthly records for the
> station
> > simultaneously
> > - If no valid measurement exists in any record for a given
> month,
> > record NA (or equivalent)
> > - If exactly one valid measurement exists for a given month,
> use that
> > value
> > - If more than one valid measurement exists for a given
> month, use the
> > average of all valid measurements
> >
> > After all records have been combined in this manner,
> estimate missing
> > annual values where possible.
> >
> > I appreciate your thoughts on this.
> >
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> >
> >
> >
> -
> Reto Ruedy <rruedy@giss.nasa.gov>
>
-
Reto Ruedy <rruedy@giss.nasa.gov>

From: Reto Ruedy [rruedy@giss.nasa.gov]
Sent: Thursday, October 04, 2007 11:09 AM
To:
Cc: cdmss@giss.nasa.gov
Subject: Re: Station ID 62103970000

Good morning /

In our procedure, the MCDW record of Claremorris (Ireland) survived
(barely) step 1 as an individual series, since it was too short to be combined with the other sources.

It got dropped at the beginning of step 2 together with all records that did not contain at least 20 years of data.

For our purpose, this record had no use. More generally, records shorter than 4 years are not used by our procedure; if it helps to keep your program from crashing, you may as well disregard them right away.

By the way, I did carry out the analysis combining sources in the order of their length (rather than starting with MCDW). It caused a slight but insignificant increase in the temperature trend. The individual global annual means were affected by -0.003C (1910-1920) to +0.005C (1995-present), whereas the margin of error is of the order of magnitude of 0.1 C.

When Dr. Hansen comes back from travel, he will decide how much of this analysis will be put on the web.

As you see from your own mail, all GHCN data are rounded to the nearest tenth of a degree. So there is no point worrying about procedural modifications that affect station data anomalies by less than .1C . At the end of step 1 and step 2, we again round the data to the nearest tenth of a degree.

At the beginning of step 3, we subtract from each time series its 1951-1980 mean, hence any vertical shifts introduced by the "bias method" in step 1 will cancel out at that point.

Thanks for your interest,

Reto A. Ruedy

On Thu, 2007-10-04 at 08:59 -0400, wrote:
> Good morning Dr. Reudy,
>
> My program choked when I tried to process the data for record 6 of
> station 62103970000 (the last of seven records for the station). When
> I looked at the record on GISS I noticed the entire record is as follows:
>
> YEAR JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC D-J-F M-A-M J-J-A S-O-N ANN
> 1993 999.9 999.9 999.9 999.9 999.9 999.9 14.0 13.4 11.6 7.5 5.8 999.9 999.9 999.9 13.7 8.3 999.90
> 1994 5.0 4.2 6.8 999.9 10.1 999.9 14.6 999.9 999.9 999.9 999.9 999.9 4.6 8.5 999.9 999.9 999.90
>
>

> The question I had was, since there is very little data in this record
> and no annual average can be estimated, is this a useful record?
>
> (This is a harmless question - I am just curious)
>
> Thanks,
>