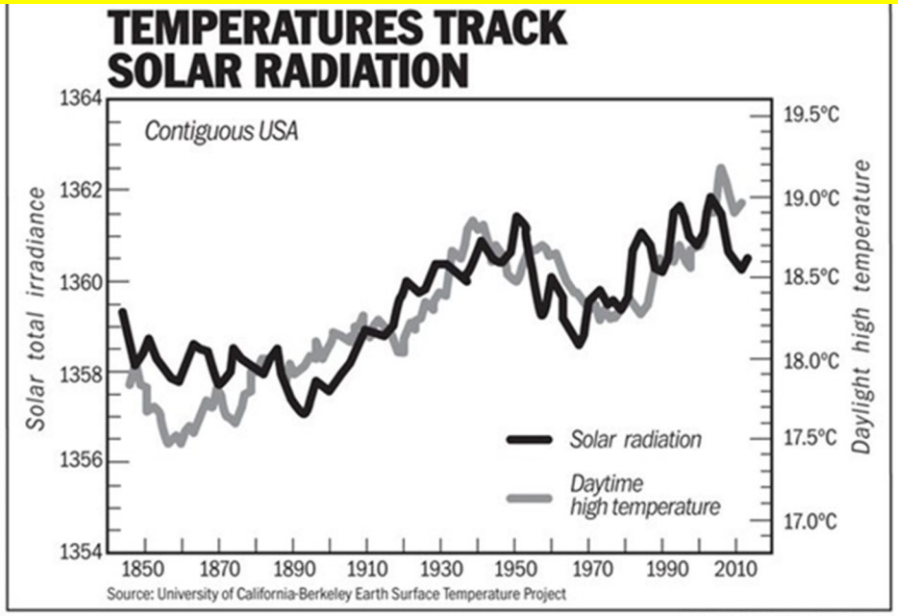
Bringing us up to date on Trump Energy Department's Effort to Repeal Obama's "Endangerment Finding"



Bob Endlich

bendlich@msn.com

Cruces Atmospheric Sciences Forum

16 Aug 2025

TOPICS

1. Information on Obama EPA's "Endangerment Finding" …
   From the Heartland Institute's 2018 America First Energy Conference & CASF web site
   https://casf.me/wp-content/uploads/2019/04/EPA_Endangerment_Finding_is_Wrong_20_Apr_2019.pdf

2. More from CASF web site: why the Endangerment Finding is not valid

3. Info on Trump 2025 Energy Department initiative to repeal:
   "*Climate Working Group (2025) A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate," Washington DC: Department of Energy, July 23, 2025,"*
   https://www.energy.gov/sites/default/files/202507/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

Suggested further discussion is in this video:

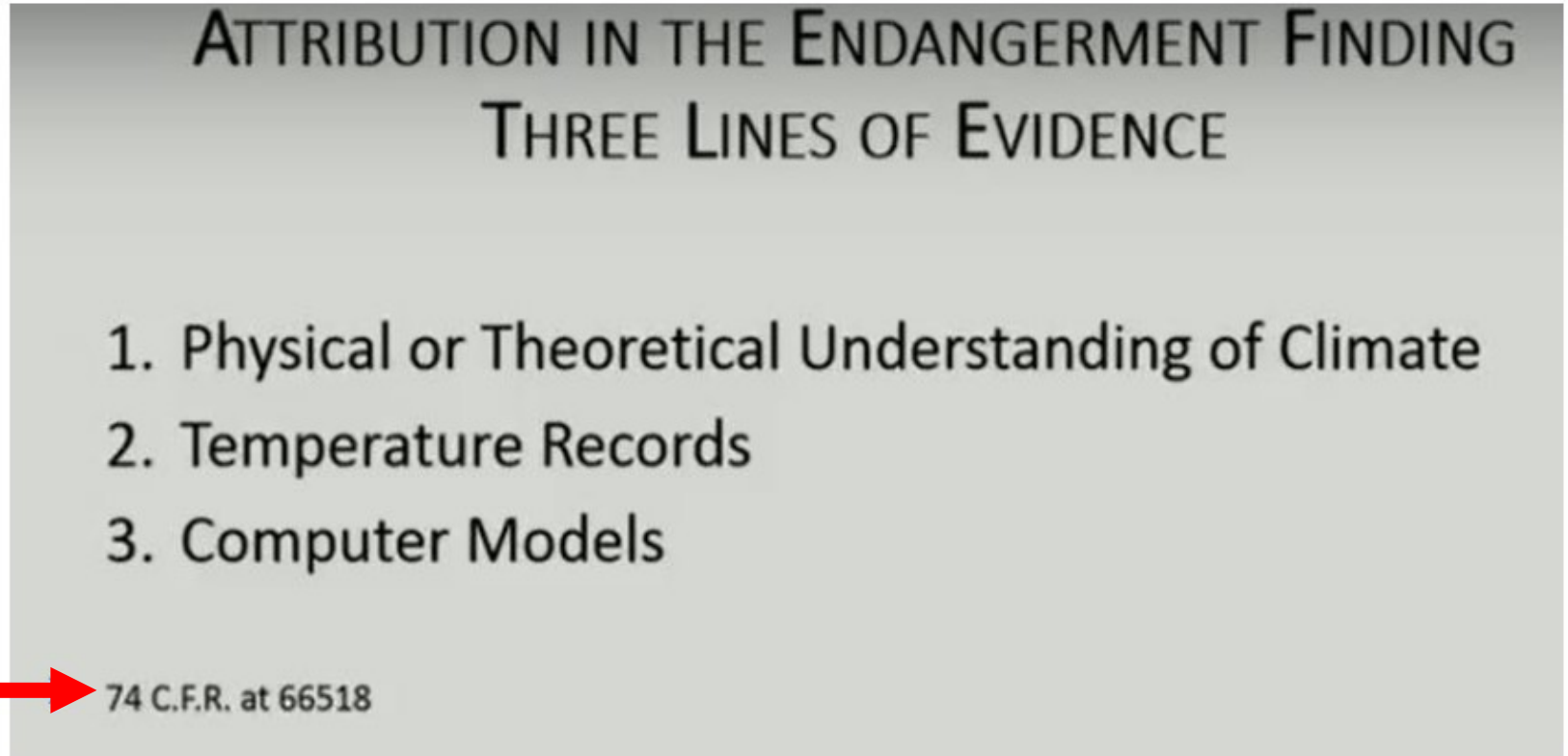
4. Kim Strassel interview of Energy Secretary Chris Wright https://youtu.be/r--BO8VXgnU

Information on Obama EPA's "Endangerment Finding," from 2018'S Heartland Institute Energy Conference and the CASF web site

Source: Heartland Institute's *America First Energy Conference*, New Orleans 2018
https://heartland.org/opinion/america-first-energy-conference-highlights-gains-remaining-work

https://www.heartland.org/multimedia/videos/harry-macdougald-afec-panel-5b-the-endangerment-finding

ATTRIBUTION ANALYSIS using the Three Lines of Evidence published in the Code of Federal Regulations



"74 C.F.R. at 66518"

Means Volume 74 of the Federal Register,

page 66518

Federal Register

Tuesday,
December 15, 2009

First year of the Obama Adminsitration

Part V

Environmental Protection Agency

40 CFR Chapter I

Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule

Here is page 66518,

the Attribution

Paragraph is highlighted.

Larger font is on the next page.

Hadley Center record, slowed. However, the NOAA and NASA trends do not show the same marked slowdown for the 1999–2008 period. Year-to-year fluctuations in natural weather and climate patterns can produce a period that does not follow the long-term trend. Thus, each year may not necessarily be warmer than every year before it, though the long-term warming trend continues.[21]

The scientific evidence is compelling that elevated concentrations of heat-trapping greenhouse gases are the root cause of recently observed climate change. The IPCC conclusion from 2007 has been re-confirmed by the June 2009 USGCRP assessment that most of the observed increase in global average temperatures since the mid-20th century is very likely[22] due to the observed increase in anthropogenic greenhouse gas concentrations. Climate model simulations suggest natural forcing alone (*e.g.*, changes in solar irradiance) cannot explain the observed warming.

The attribution of observed climate change to anthropogenic activities is based on multiple lines of evidence. The first line of evidence arises from our basic physical understanding of the effects of changing concentrations of greenhouse gases, natural factors, and other human impacts on the climate system. The second line of evidence arises from indirect, historical estimates of past climate changes that suggest that the changes in global surface temperature over the last several decades are unusual.[23] The third line of evidence arises from the use of computer-based climate models to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic).

The claim that natural internal variability or known natural external forcings can explain most (more than half) of the observed global warming of the past 50 years is inconsistent with the vast majority of the scientific literature, which has been synthesized in several assessment reports. Based on analyses of widespread temperature increases throughout the climate system and changes in other climate variables, the IPCC has reached the following conclusions about external climate forcing: "It is extremely unlikely (<5 percent) that the global pattern of warming during the past half century can be explained without external forcing, and very unlikely that it is due to known natural external causes alone" (Hegerl *et al.*, 2007). With respect to internal variability, the IPCC reports the following: "The simultaneous increase in energy content of all the major components of the climate system as well as the magnitude and pattern of warming within and across the different components supports the conclusion that the cause of the [20th century] warming is extremely unlikely (<5 percent) to be the result of internal processes" (Hegerl *et al.*, 2007). As noted in the TSD, the observed warming can only be reproduced with models that contain both natural and anthropogenic forcings, and the warming of the past half century has taken place at a time when known natural forcing factors alone (solar activity and volcanoes) would likely have produced cooling, not warming.

United States temperatures also warmed during the 20th and into the 21st century; temperatures are now approximately 0.7 °C (1.3 °F) warmer than at the start of the 20th century, with an increased rate of warming over the past 30 years. Both the IPCC and CCSP reports attributed recent North American warming to elevated greenhouse gas concentrations. The CCSP (2008g) report finds that for North America, "more than half of this warming [for the period 1951–2006] is likely the result of human-caused greenhouse gas forcing of climate change."

Observations show that changes are occurring in the amount, intensity, frequency, and type of precipitation. Over the contiguous United States, total increased rate. It is very likely that the response to anthropogenic forcing contributed to sea level rise during the latter half of the 20th century. It is not clear whether the increasing rate of sea level rise is a reflection of short-term variability or an increase in the longer-term trend. Nearly all of the Atlantic Ocean shows sea level rise during the last 50 years with the rate of rise reaching a maximum (over 2 mm per year) in a band along the U.S. east coast running east-northeast.

Satellite data since 1979 show that annual average Arctic sea ice extent has shrunk by 4.1 percent per decade. The size and speed of recent Arctic summer sea ice loss is highly anomalous relative to the previous few thousands of years.

Widespread changes in extreme temperatures have been observed in the last 50 years across all world regions including the United States. Cold days, cold nights, and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent.

Observational evidence from all continents and most oceans shows that many natural systems are being affected by regional climate changes, particularly temperature increases. However, directly attributing specific regional changes in climate to emissions of greenhouse gases from human activities is difficult, especially for precipitation.

Ocean carbon dioxide uptake has lowered the average ocean pH (increased the acidity) level by approximately 0.1 since 1750. Consequences for marine ecosystems may include reduced calcification by shell-forming organisms, and in the longer term, the dissolution of carbonate sediments.

Observations show that climate change is currently affecting U.S. physical and biological systems in significant ways. The consistency of these observed changes in physical and biological systems and the observed significant warming likely cannot be explained entirely due to natural variability or other confounding non-climate factors.

b. Key Projections Based Primarily on Future Scenarios of the Six Greenhouse Gases

[21] Karl T. *et al.*, (2009).

[22] The IPCC Fourth Assessment Report uses specific terminology to convey likelihood and confidence. Likelihood refers to a probability that the statement is correct or that something will occur. "Virtually certain" conveys greater than 99 percent probability of occurrence; "very likely" 90 to 99 percent; "likely" 66 to 90 percent. IPCC assigns confidence levels as to the correctness of a statement. "Very high confidence" conveys at least

This page is filled with alarmist propaganda, junk science, and unfounded statements, from the Obama Administration.

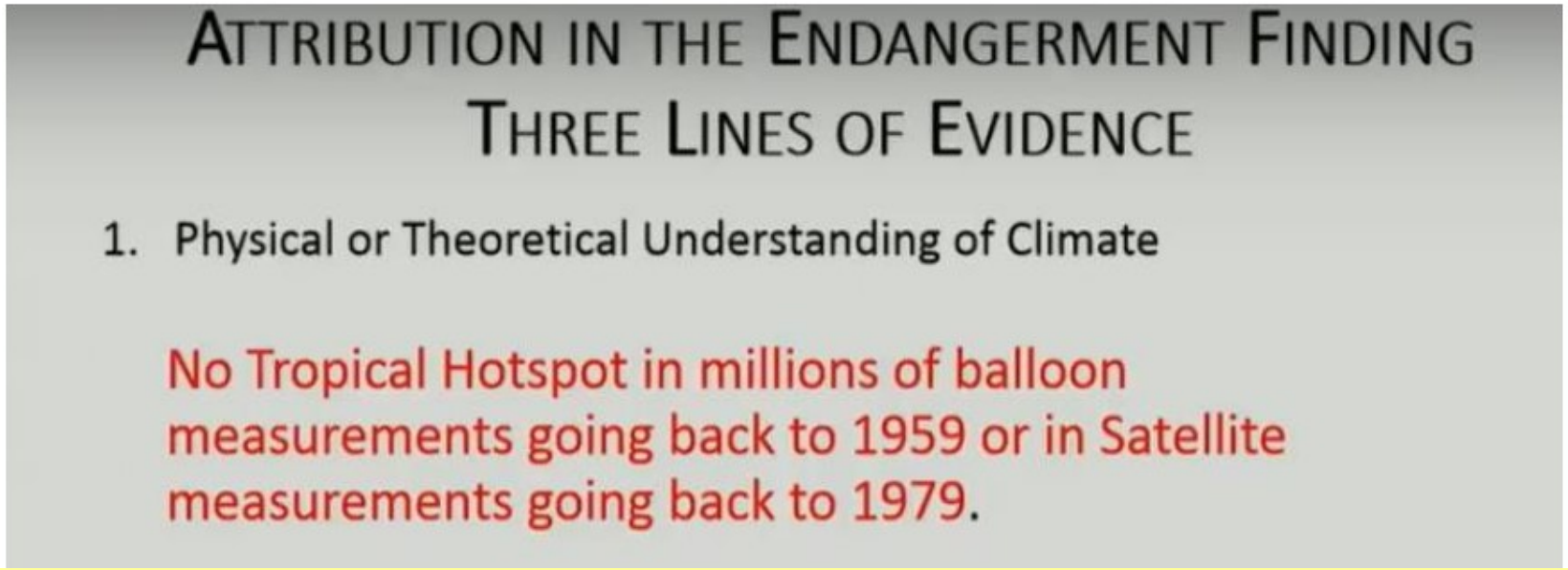
"The **attribution** of observed climate change to anthropogenic activities **is based on multiple lines of evidence**.

The **first line of evidence arises from our basic physical understanding of** the effects of changing concentrations of greenhouse gases, natural factors, and other human impacts on **the climate system**.

The **second line of evidence** arises from indirect, historical estimates of past climate changes that suggest that the **changes in global surface temperature over the last several decades are unusual.**

The **third line of evidence arises from the use of computer-based climate models** to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic)." <Paragraphing, **bolding**, added>

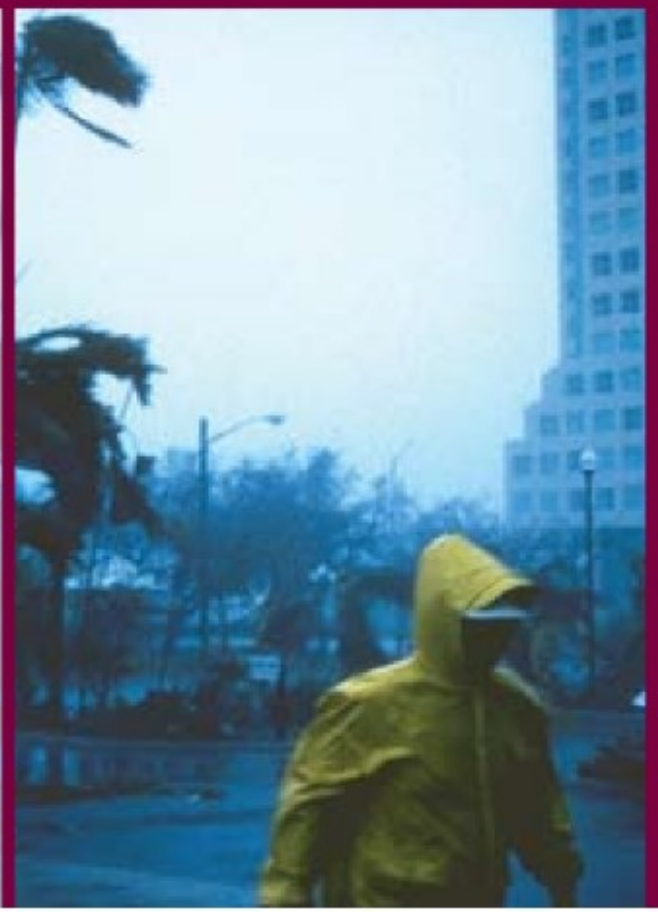
1. Physical or Theoretical Understanding of Climate



Items in red are Heartland Institute subject areas which specifically reject the premise, in this case, the Obama Administration statement that a 'physical or theoretical understanding of climate justifies calling <CO2> increases an "endangerment" to humans.'

https://www.gfdl.noaa.gov/bibliography/related_files/vr0603.pdf

CHAPTER 1



Why do temperatures vary vertically (from the surface to the stratosphere) and what do we understand about why they might vary and change over time?

Convening Lead Author: V. Ramaswamy, NOAA
Lead Authors: J.W. Hurrell, NSF NCAR; G.A. Meehl, NSF NCAR
Contributing Authors: A. Phillips, NCAR, Boulder;
B.D. Santer, DOE LLNL; M.D. Schwarzkopf, NOAA;
D.J. Seidel, NOAA; S.C. Sherwood, Yale Univ.;
P.W. Thorne, U.K. Met. Office

from NOAA's Geophysical Fluid Dynamics Laboratory in Princeton, N.J.

SUMMARY

The U.S. Climate Change Science Program

This is from NOAA's Geophysical Fluid Dynamics Laboratory (GFDL)

https://www.gfdl.noaa.gov/bibliography/related_files/vr0603.pdf

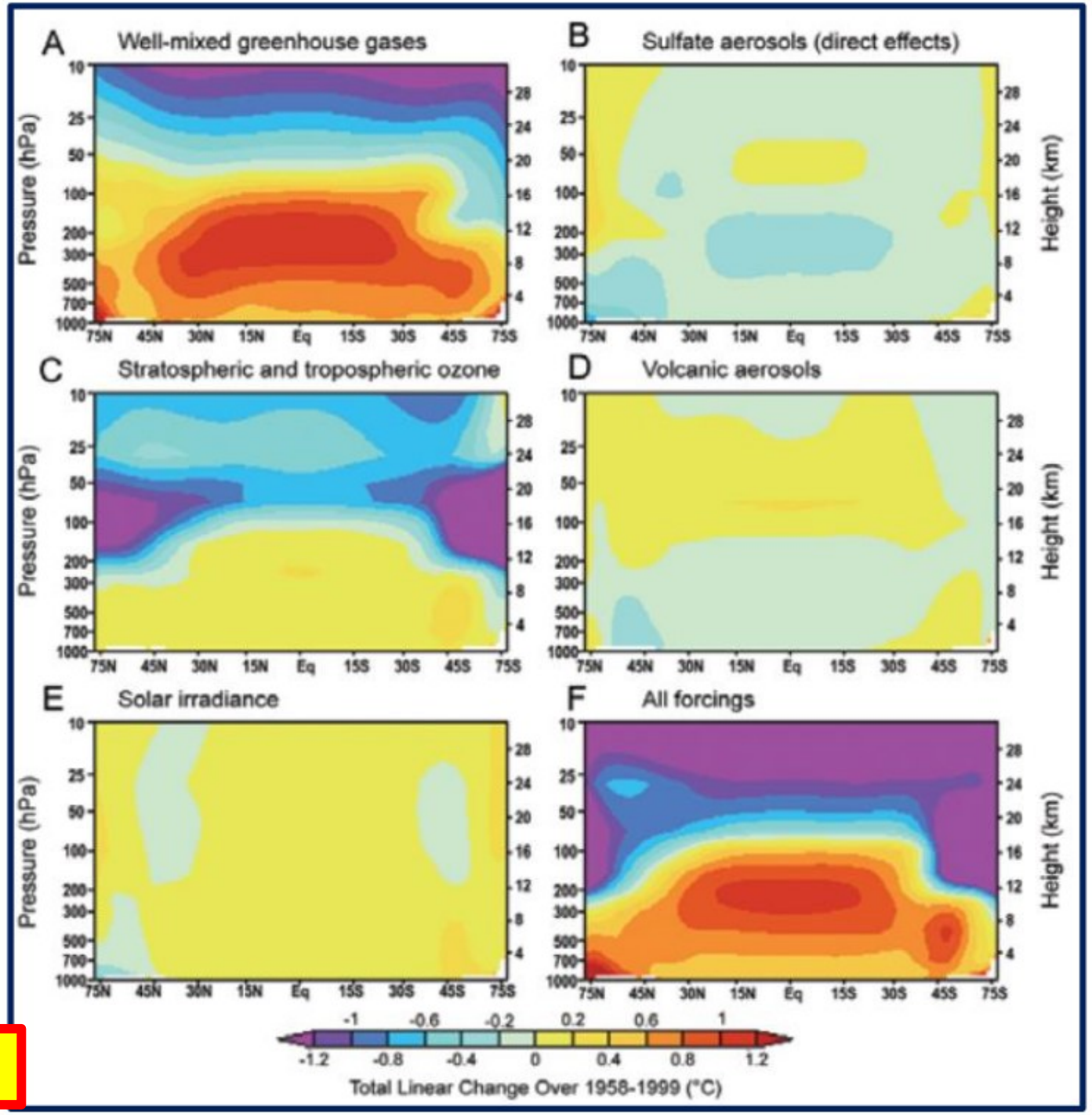
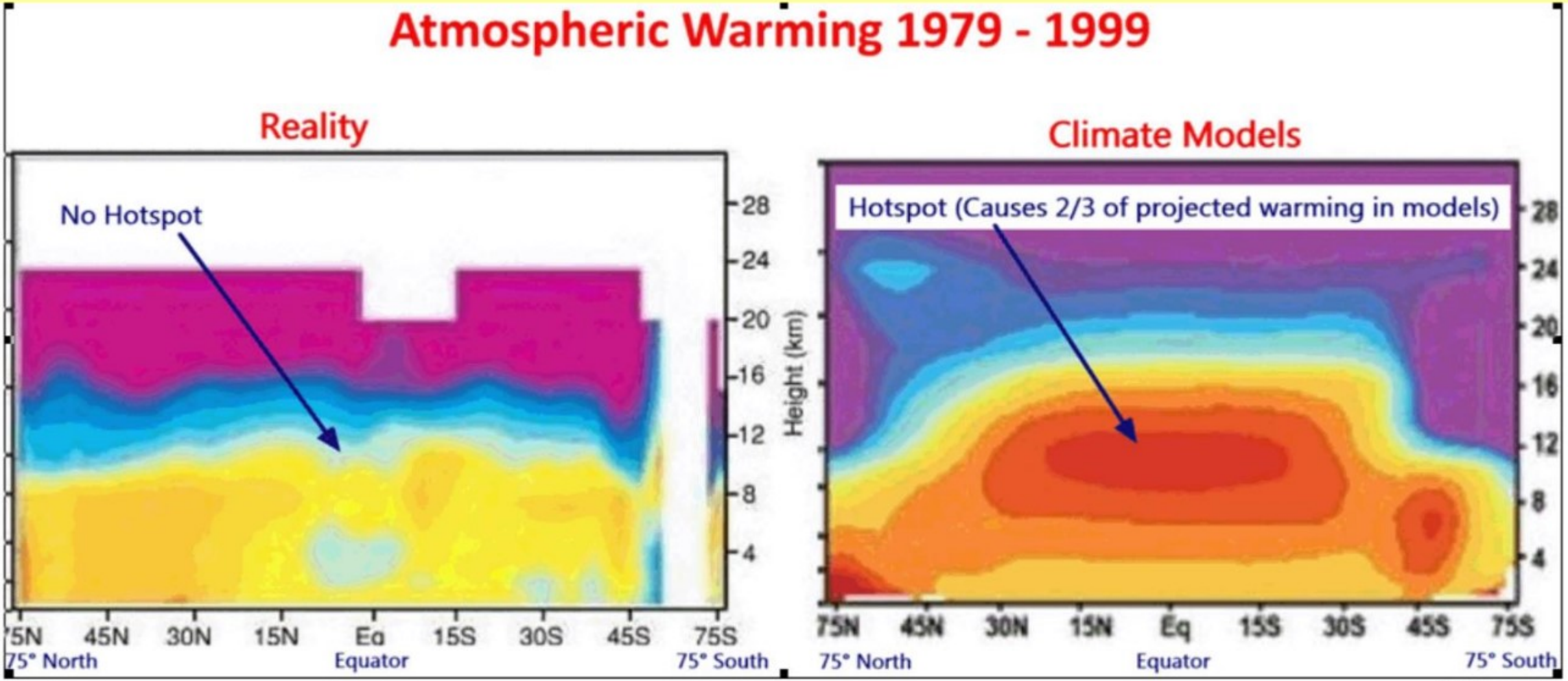


Figure 1.3.
….simulations of the vertical profile of temperature change due to various forcings, and the effect due to all forcings taken together (after Santer et al., 2000)

Ben Santer is a noted Climate Alarmist.

https://cbdakota.files.wordpress.com/2011/09/fourfatalpieceshotspot.gif



Obama Administration

It's obvious Government claims of a theoretical and physical understand the climate are fundamentally wrong.

2. Temperature Records

2. Temperature Records

- Uncorrupted temperature records are explained by natural factors. No basis for thinking temperatures are outside natural variability.

https://thsresearch.wordpress.com/wp-content/uploads/2017/05/chap3-published-in-elsevier.pdf

Uncorrupted temperature records contain natural cycles.

Temperature Record containing natural cycles

This graphic, others, show the 1930s Dust Bowl years warmer than 2000s

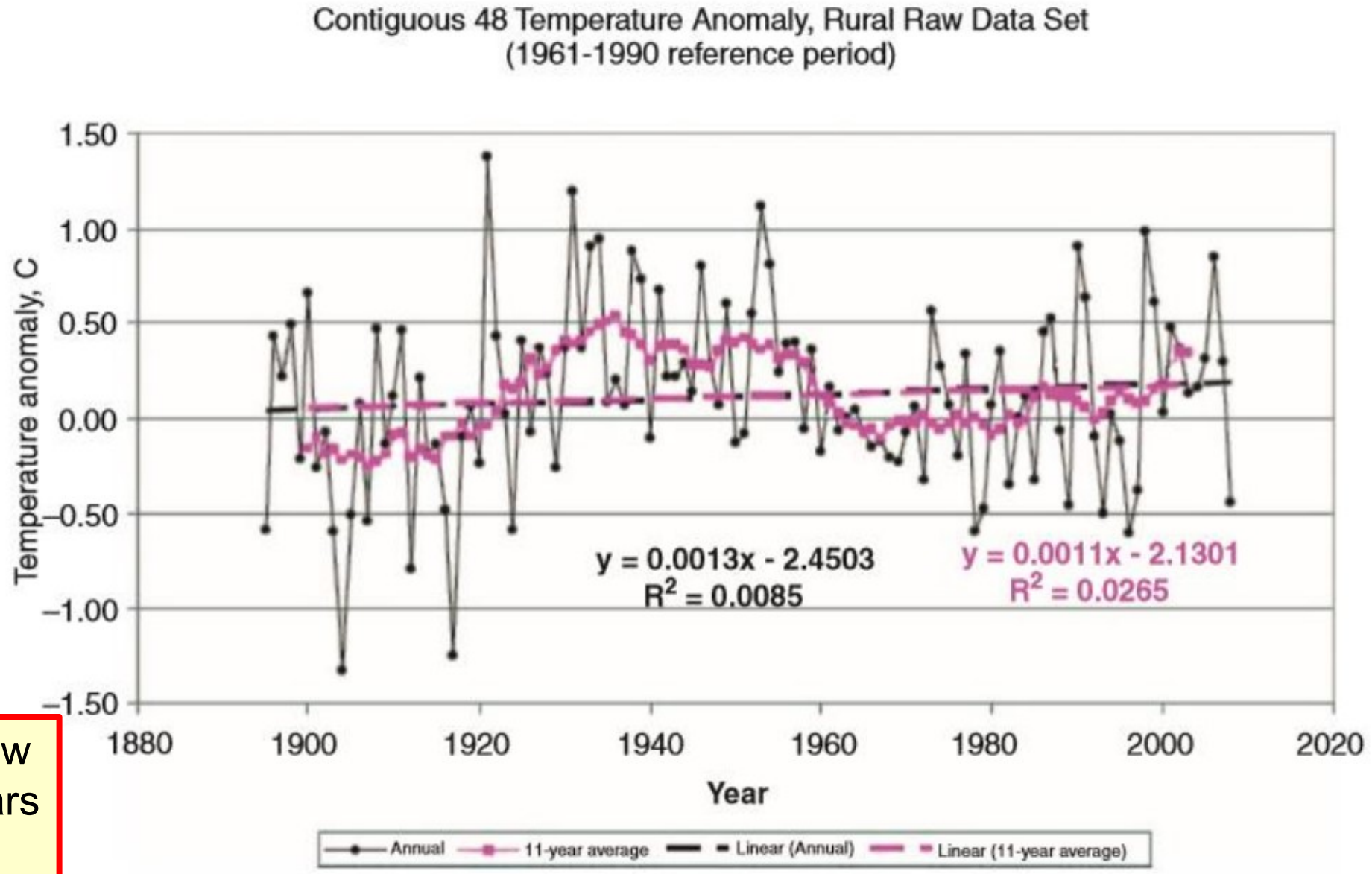
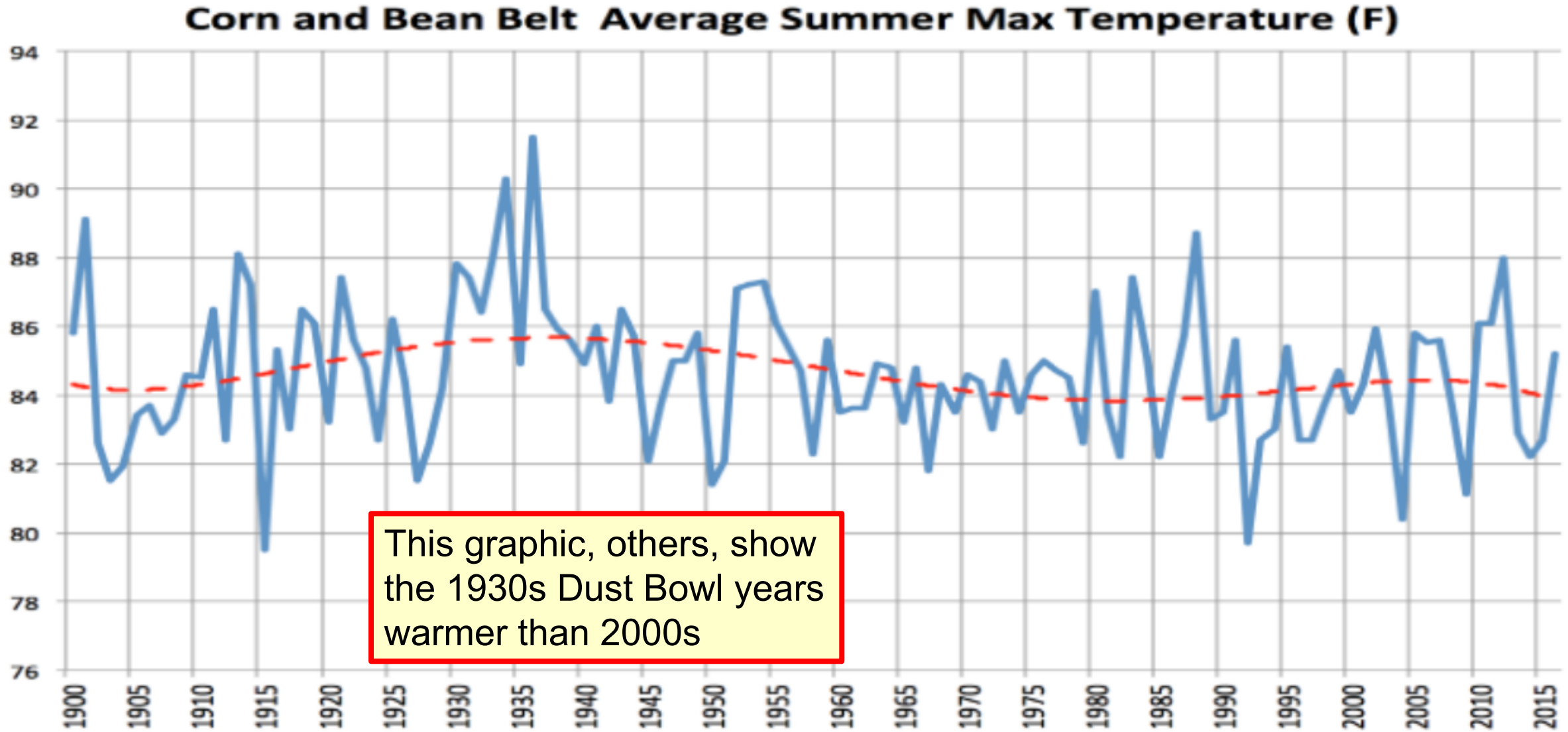


FIGURE 28 Edward long analysis of rural raw stations for the lower 48 states, USHCN version 2. Note the very small trend 0.12 °C/century in this data set and at the significant peak in the 1930s.

Natural cycles in the USA's Corn and Bean Belt

Figure V-7

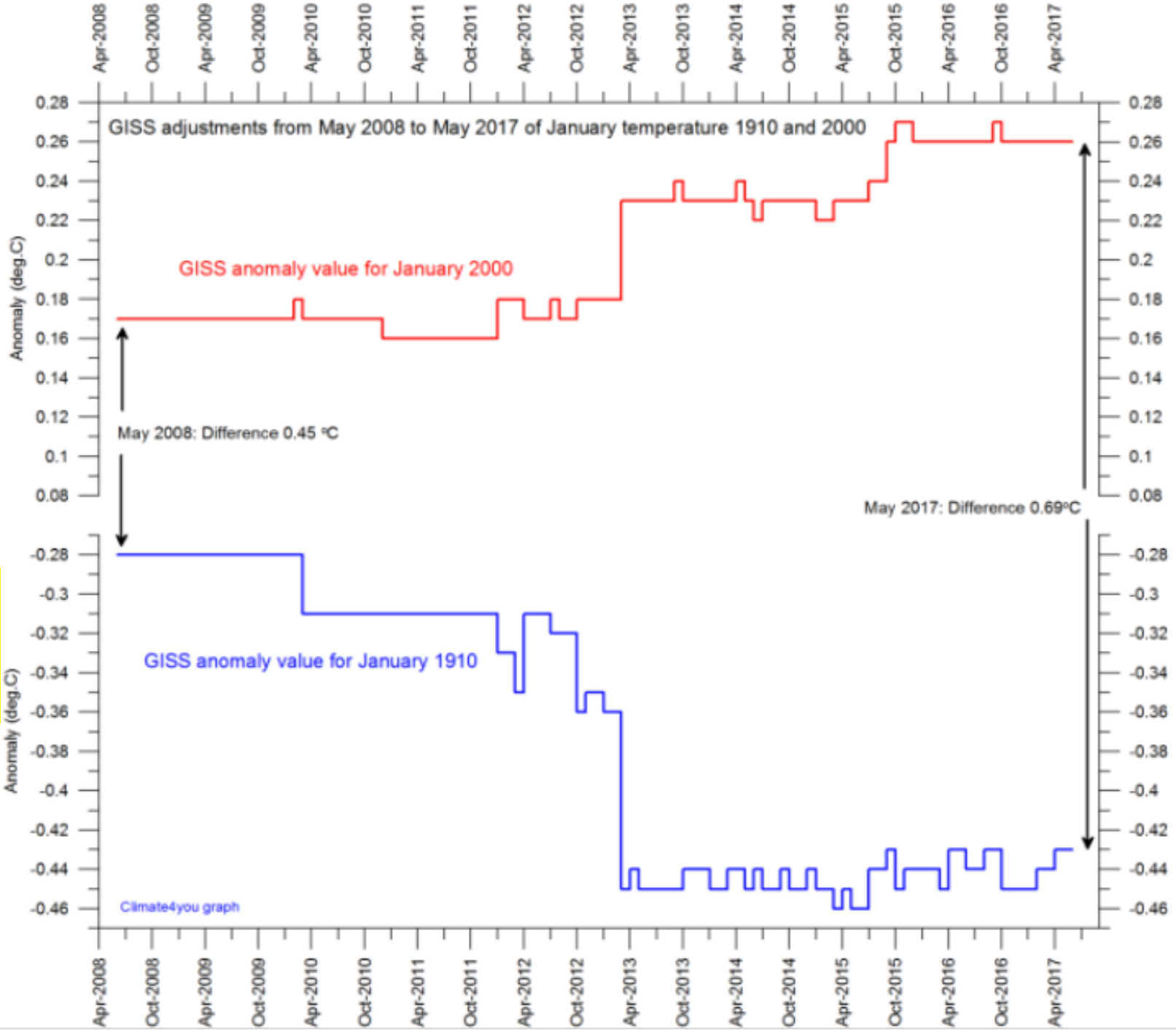


Source: NOAA Climate at a Glance

Adjustments made over time by

NASA GISS

There are many other examples of corruption by NASA GISS, others.



https://thsresearch.wordpress.com/wp-content/uploads/2017/05/chap3-published-in-elsevier.pdf

What happens to
Global Surface Temperature
when the Soviet Union collapses
and closes hundreds of research
Stations in Siberia?

Answer: Station Numbers fall and
Global Temperatures increase!

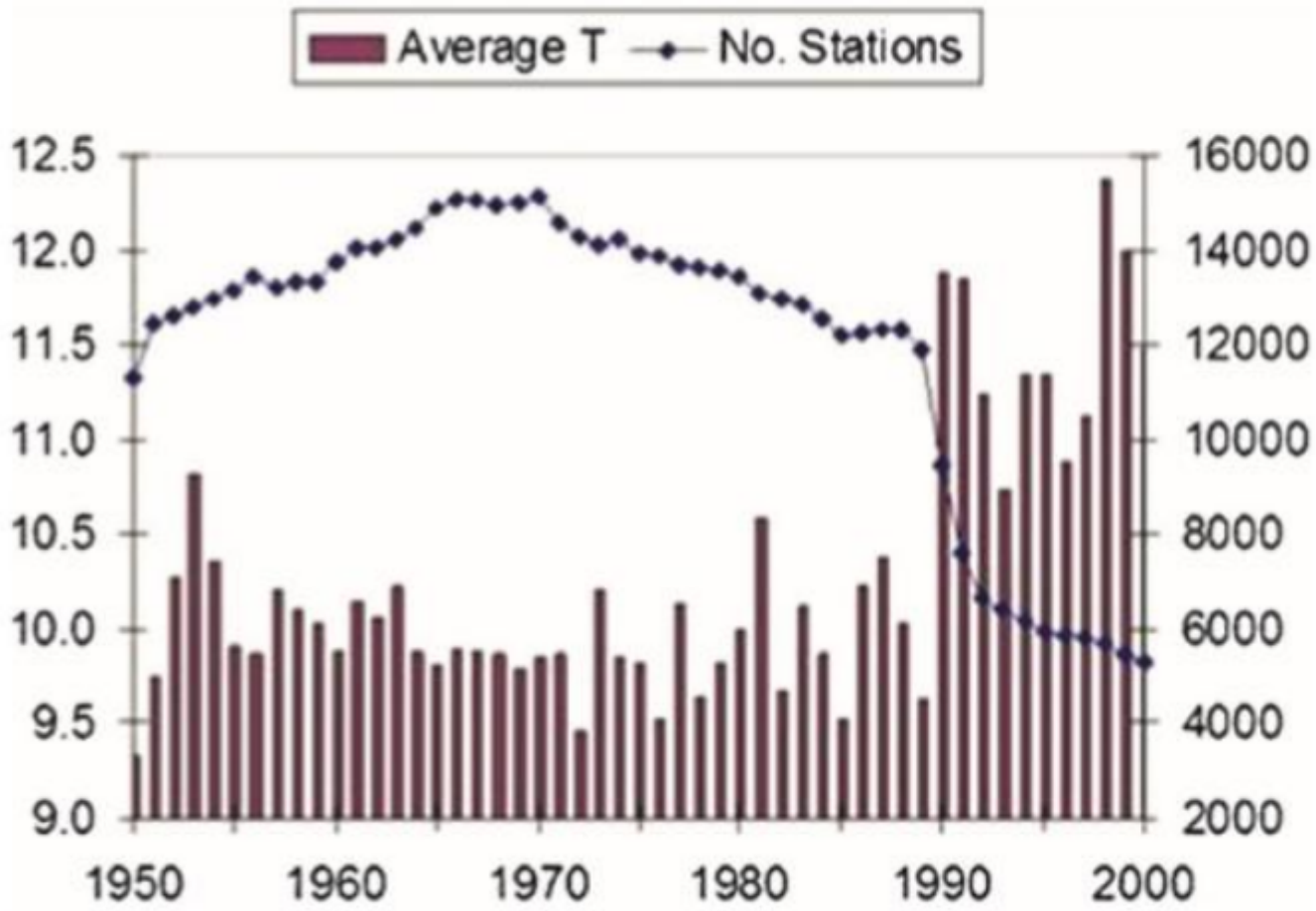
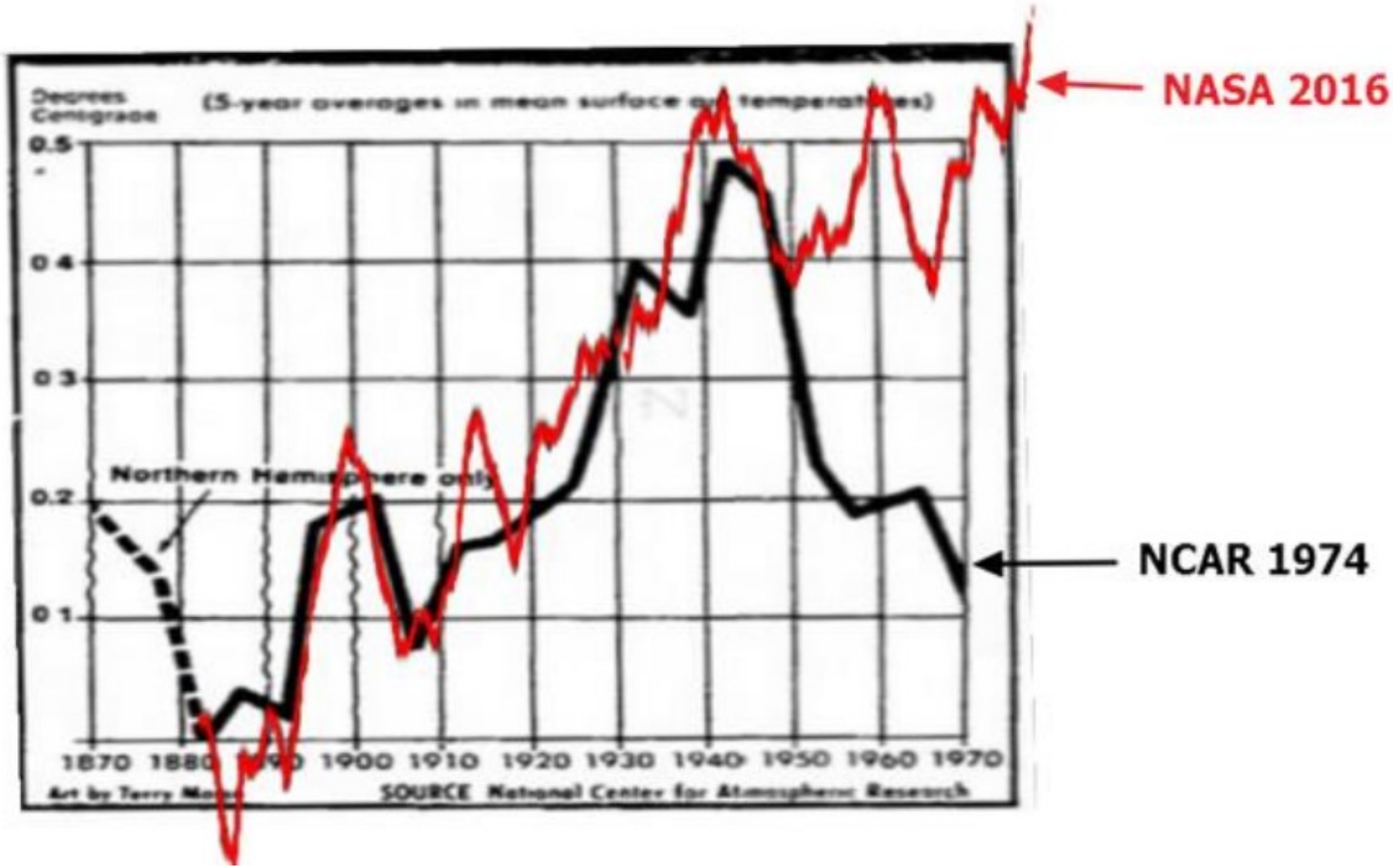


FIGURE 5 Plot of the number of total station ID's in each year since 1950 and the average temperatures of the stations in the given year.

https://stevengoddard.wordpress.com/2016/04/15/the-smoking-gun-i-have-been-looking-for/

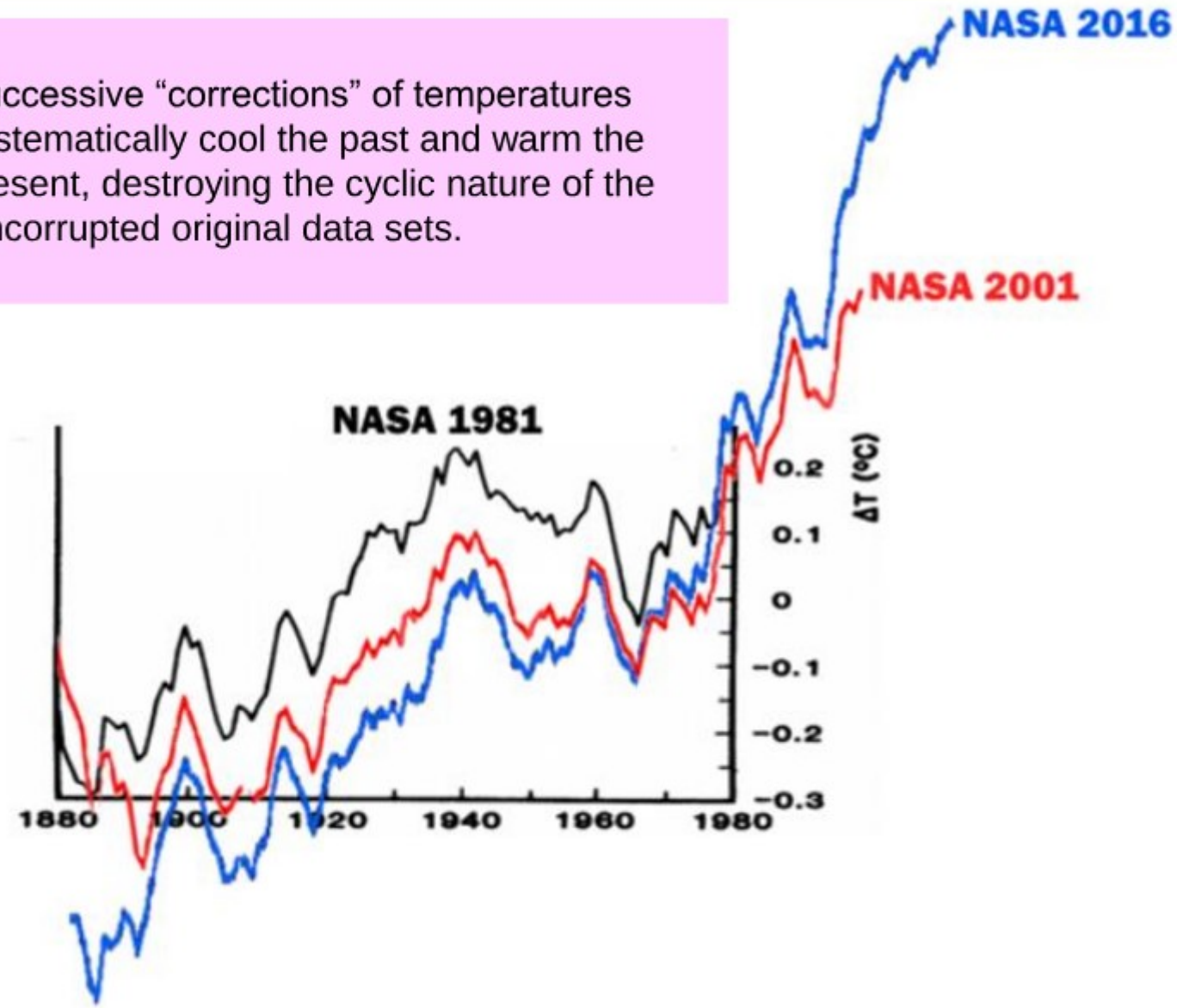
BLACK trace shows the "tooth-shaped" temperatures published by NCAR in 1974, during the "Global Cooling" scare of the 1970s

RED trace shows a recent NASA GISS temperature History.



https://realclimatescience.com/2018/01/my-climate-forecast-from-three-years-ago/

Successive “corrections” of temperatures systematically cool the past and warm the present, destroying the cyclic nature of the Uncorrupted original data sets.



3. Computer Models

3. Computer Models

All Models show the Hot Spot, which does not exist in nature.

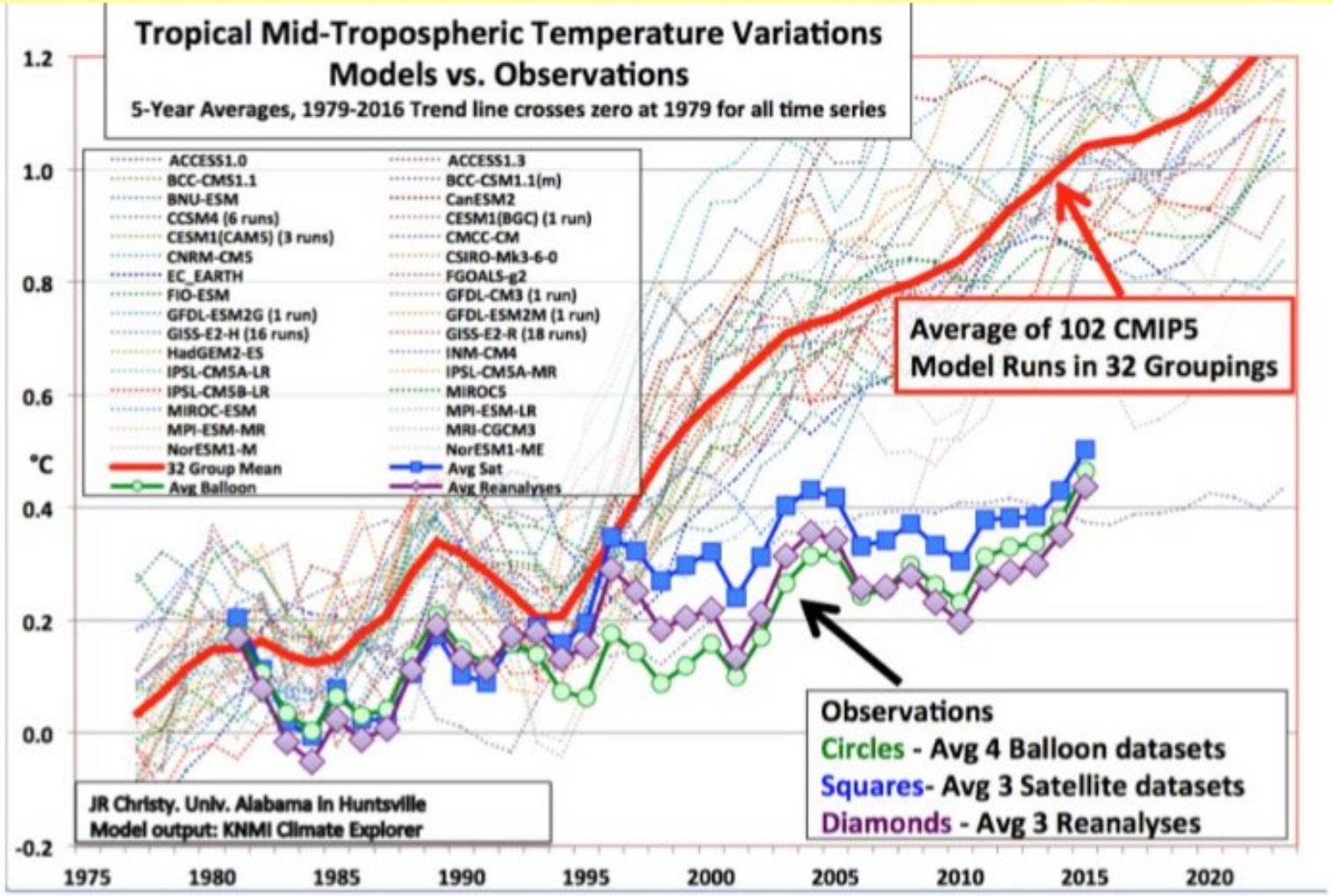
Models fail the explicit criteria for their use in detection & attribution. Not fit for making $$ Trillion policy decisions.

Could not satisfy HISA Requirements

https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-115-SY-WState-JChristy-20170329.pdf

Computer models of the Atmosphere are Fundamentally Flawed.

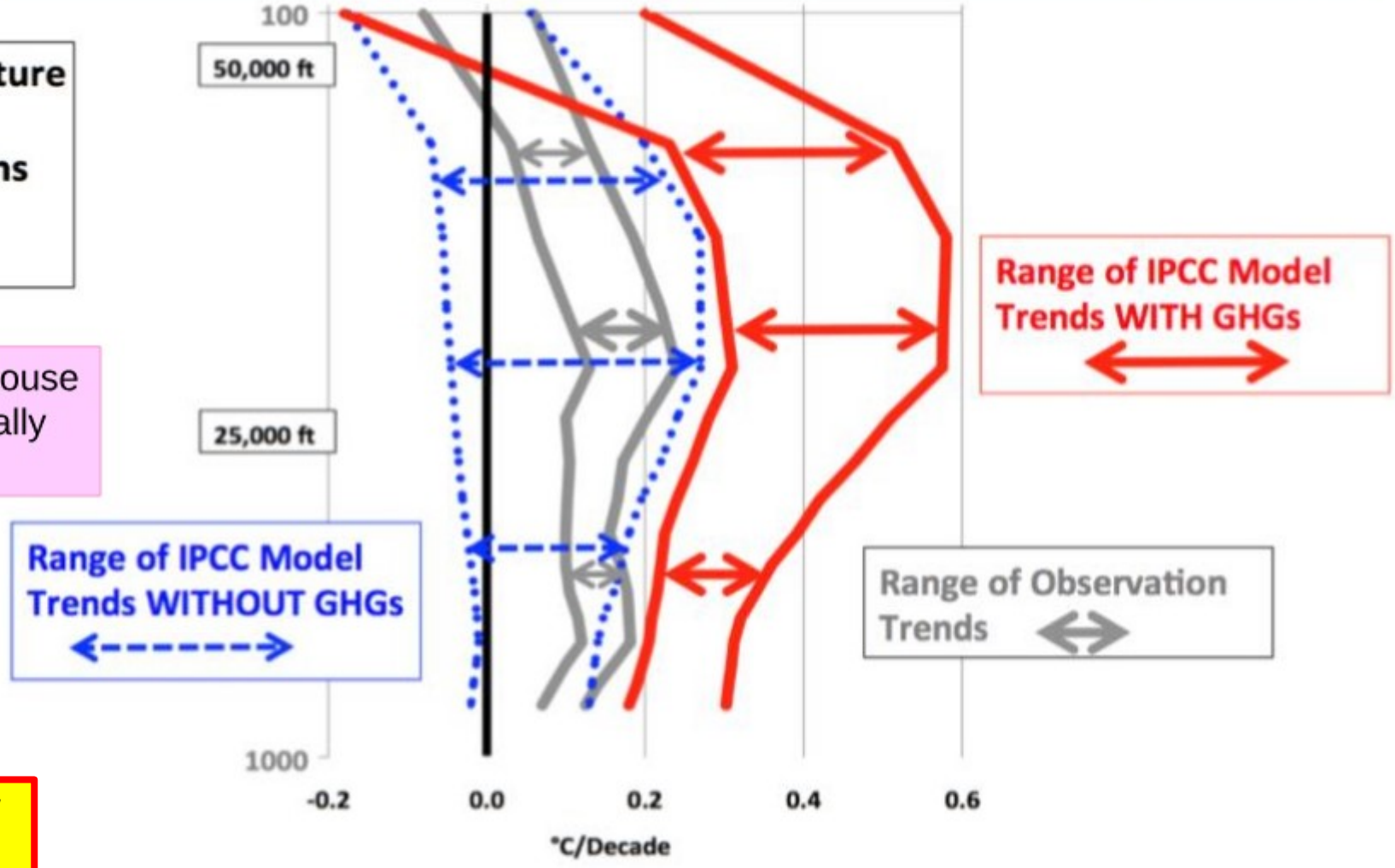
Even today, in 2025, as cited by the DOE report, the models continue to run Hot.



Five-year averaged values of annual mean (1979-2016) tropical bulk TMT as depicted by the average of 102 IPCC CMIP5 climate models (red) in 32 institutional groups (dotted lines). The 1979-2016 linear trend of all time series intersects at zero in 1979. Observations are displayed with symbols: Green circles - average of 4 balloon datasets, blue squares - 3 satellite datasets and purple diamonds - 3 reanalyses. The last observational point at 2015 is the average of 2013-2016 only, while all other points are centered, 5-year averages.

https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-115-SY-WState-JChristy-20170329.pdf

Vertical Tropical Temperature Trends
Models and Observations
1979-2010
IPCC Fig. 10.SM.1



Computer Models with Greenhouse Gases (GHGs) are fundamentally Flawed.

We will see another version of this chart in the DOE section.

The colored lines represent the range of results for the models and observations. The key point displayed is the lack of overlap between the GHG model results (red) and the observations (gray); the non-GHG model runs (blue) overlap the observations almost completely.

A preview: “the current generation of models is not fit for purpose.”

We will see in the next Topic, the one which contains

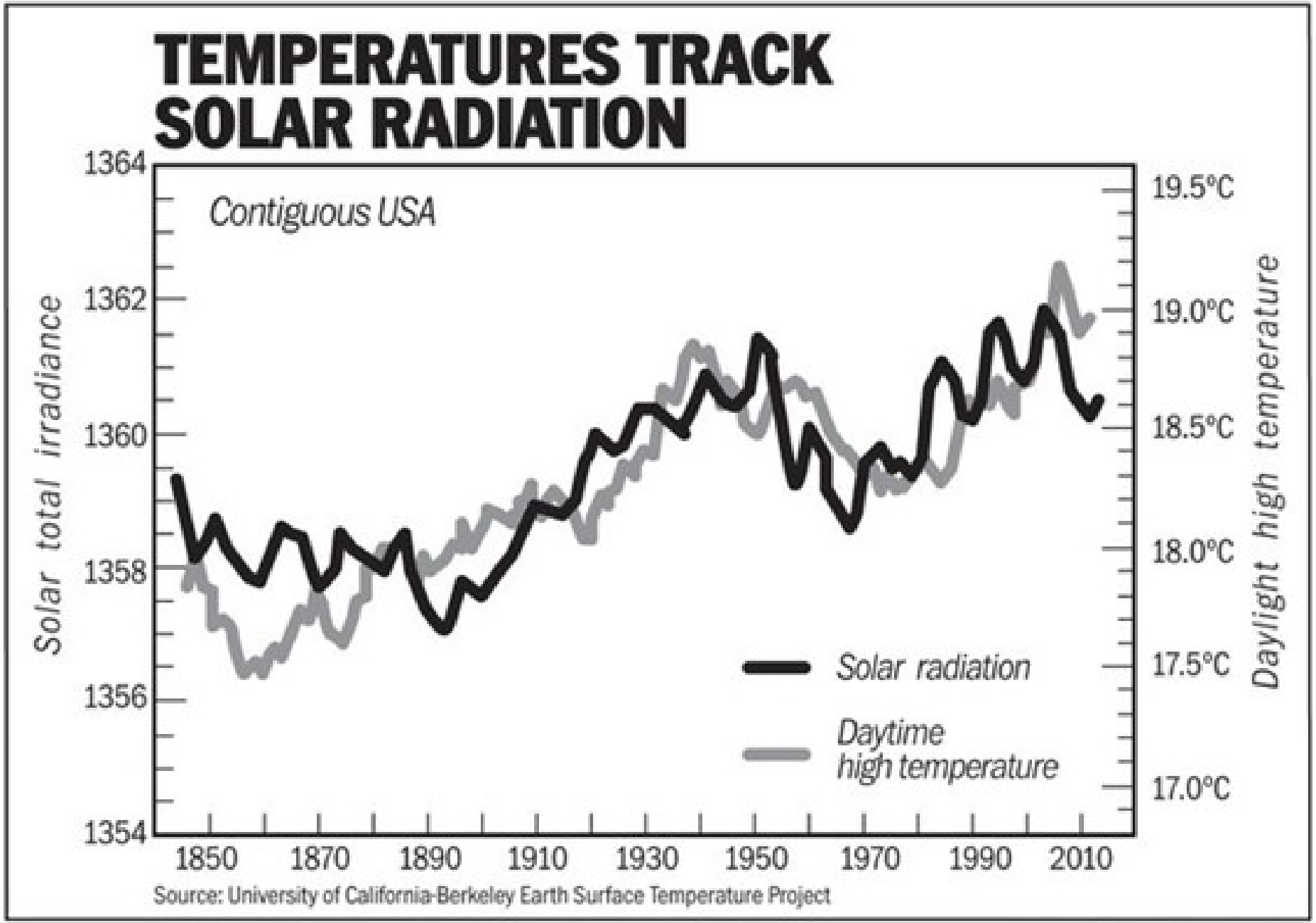
“more info on why the Endangerment Finding is not valid,”

from our own web site, more examples why present temperatures

are not outside those experienced by Earth in the recent past.

From the web site: More info on why the Endangerment Finding is not valid

http://notrickszone.com/2019/01/13/sun-as-main-driver-japanese-scientist-cites-7-major-examples-how-real-climatic-data-contradict-agw-claims-sun/



Non-Adjusted Temperature Data Appear To Correlate With 20th Century Solar Forcing

Yndestad and Solheim (2017) have released a reconstruction of solar activity (Total Solar Irradiance, or TSI) for 1700-2013.

1690
Depth of Little Ice Age

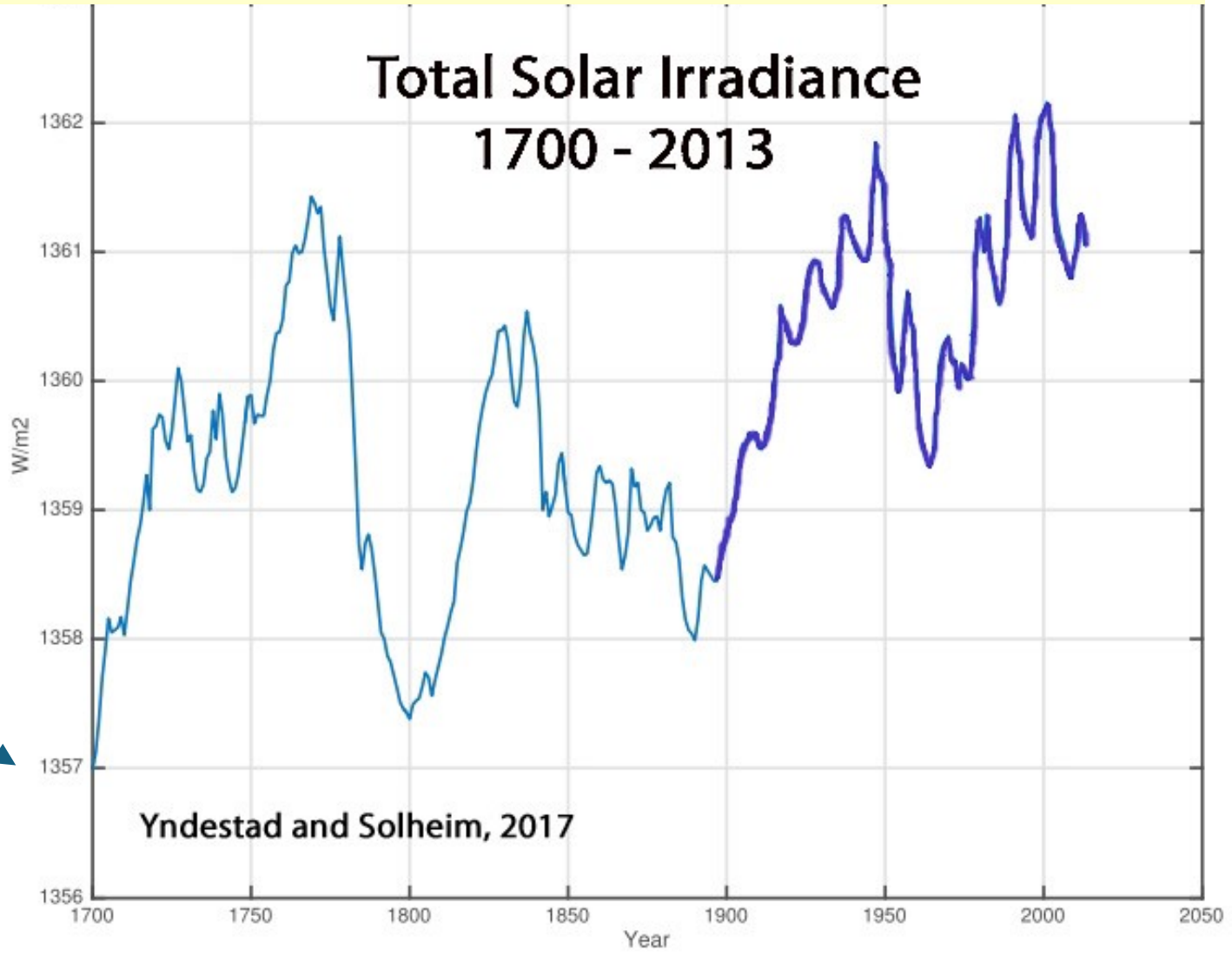
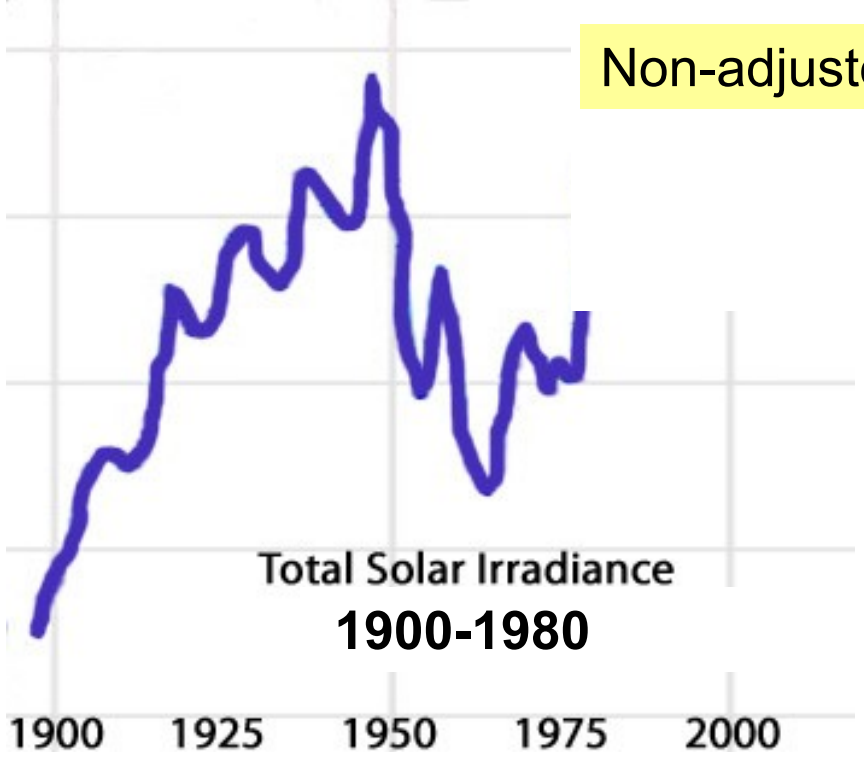
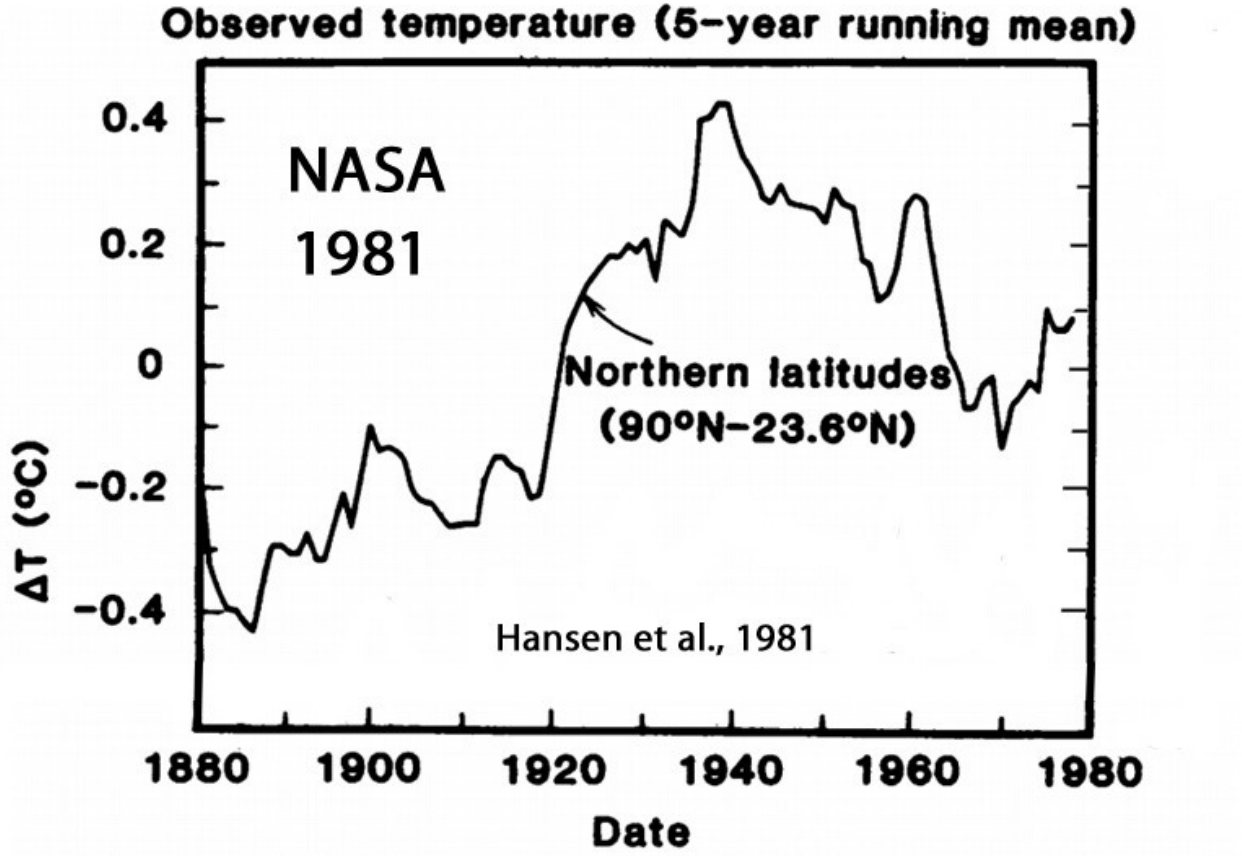


Fig. 3. TSI-HS total solar irradiance from 1700 to 2013 A.D. (Scafetta and Willson, 2014).

Non-adjusted temperature data appear to correlate with solar forcing

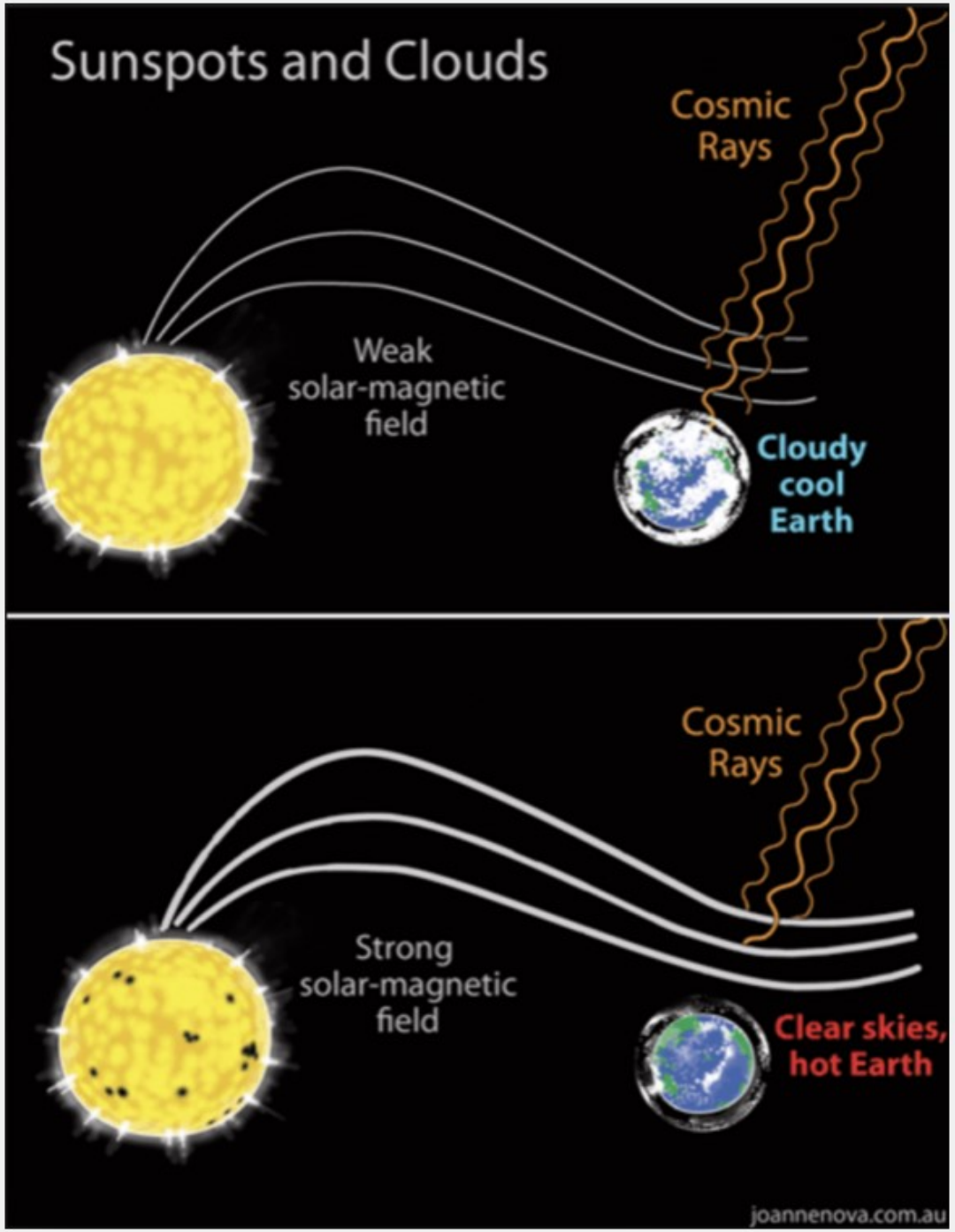




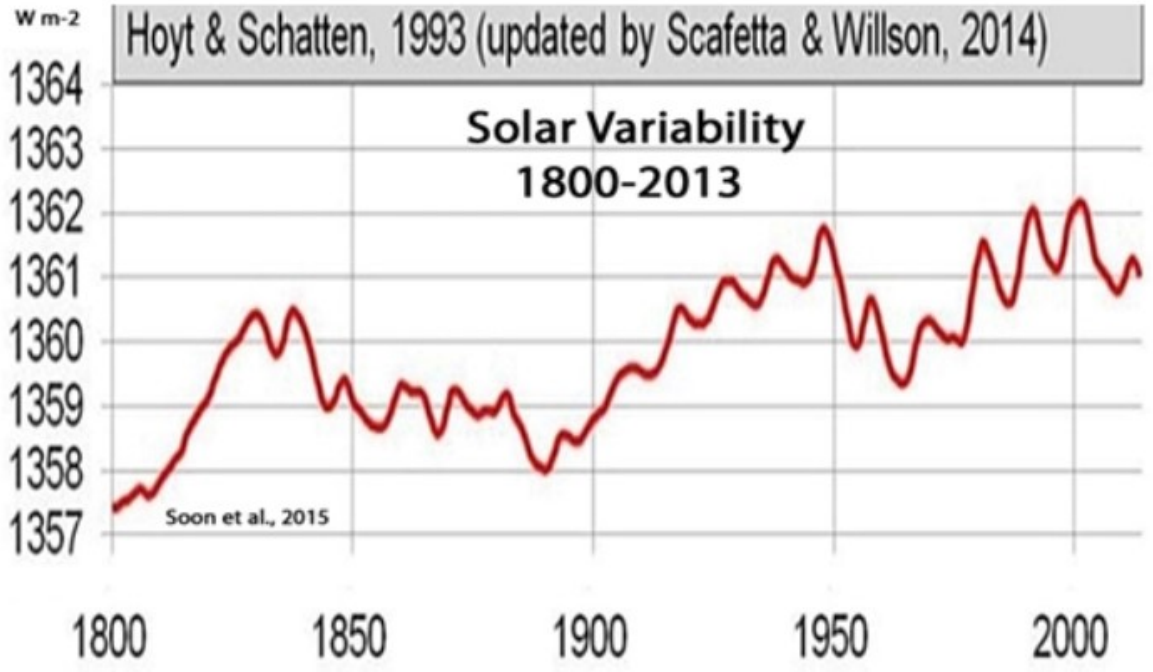
This slide did not come from the web site. However, there IS a relationship between sunspots, solar radiation…. and climate.

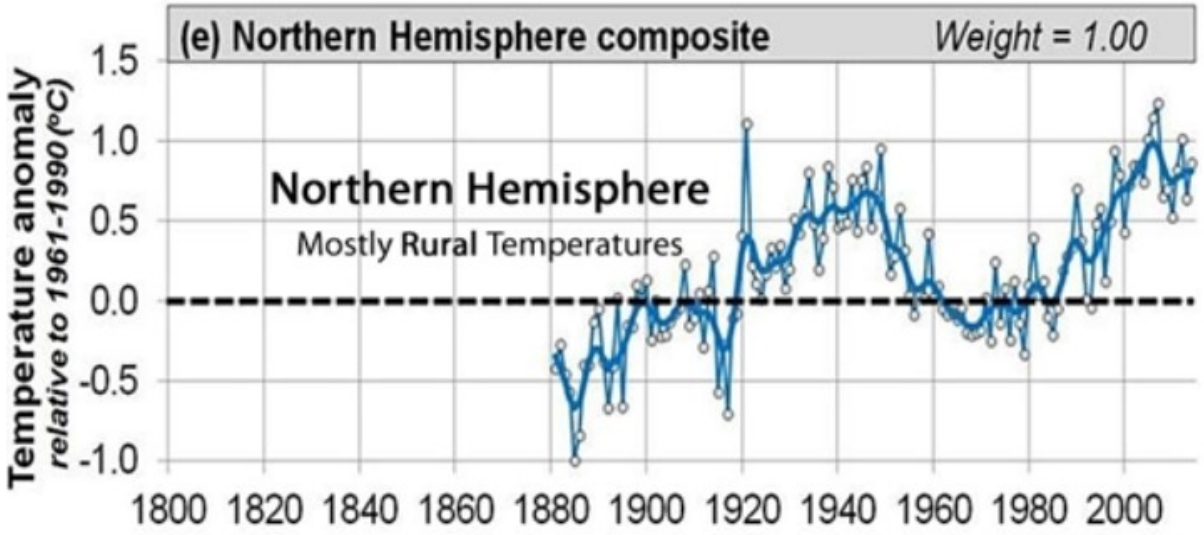
https://www.thegwpf.com/new-science-clouds-and-solar-cycles-play-role-in-climate-change/?utm_source=CCNet+Newsletter&utm_campaign=1c17e34239-EMAIL_CAMPAIGN_2019_07_15_12_37&utm_medium=email&utm_term=0_fe4b2f45ef-1c17e34239-36415645

The Intergovernmental Panel on Climate Change has discussed the impact of cloud cover on climate in their evaluations, but this phenomenon has never been considered in climate predictions due to insufficient physical understanding of it," Hyodo says.



http://notrickszone.com/2019/03/25/satellite-evidence-affirms-solar-activity-drove-a-significant-percentage-of-recent-warming/





Graph Source: **Soon et al., 2015**

https://www.nature.com/articles/news.2011.504

Published: 24 August 2011

Cloud formation may be linked to cosmic rays

Geoff Brumfiel

Nature (2011) | Cite this article

More Temperature info, from

https://casf.me/wp-content/uploads/2022/08/Data-show-that-a-little-more-warming-is-NOT-the-EXISTENTIAL-Threat-claimed-by-Alarmists_4_Aug_2021-Edited-23-Aug-2022.pdf

…the following slides:

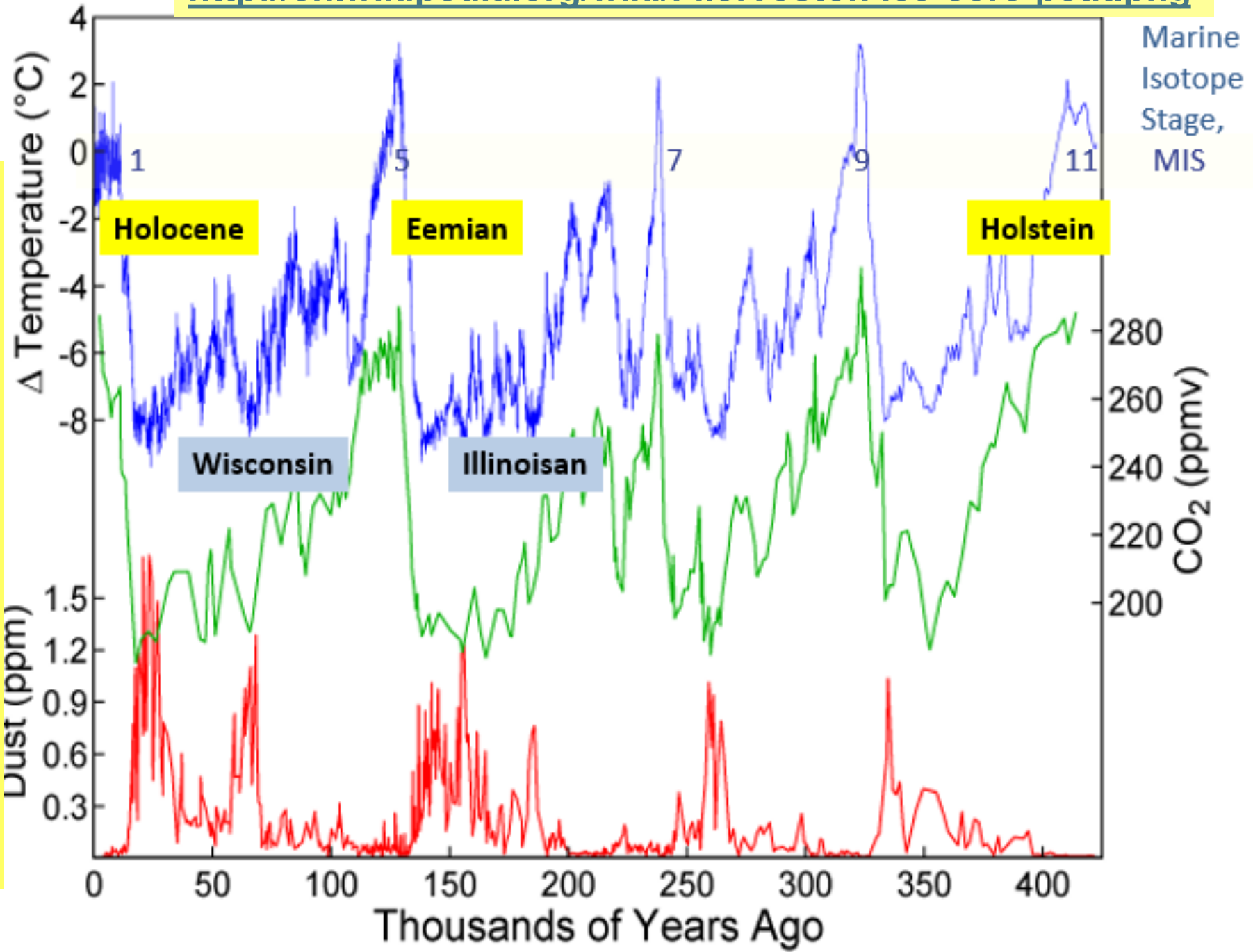
Temperature, <CO2>, and Dust time series from the Ice Cores at Vostok Station, Antarctica.

In yellow, some interglacials are named, but all of them have Marine Isotope Stage, MIS, numbers. Interglacials are the peaks in temperatures.

The Wisconsin & Illinoisian Glacial Periods, valleys in temperature, are named, in blue.

Glacial Periods must have been miserable, with cold temperatures, high winds, and frequent blowing dust.

http://en.wikipedia.org/wiki/File:Vostok-ice-core-petit.png



At the Zero Time of this plot, <CO2> was >280 ppm, ~highest on the chart.

Yet, by far, Holocene was the COLDEST interglacial of the previous 450,000 years.

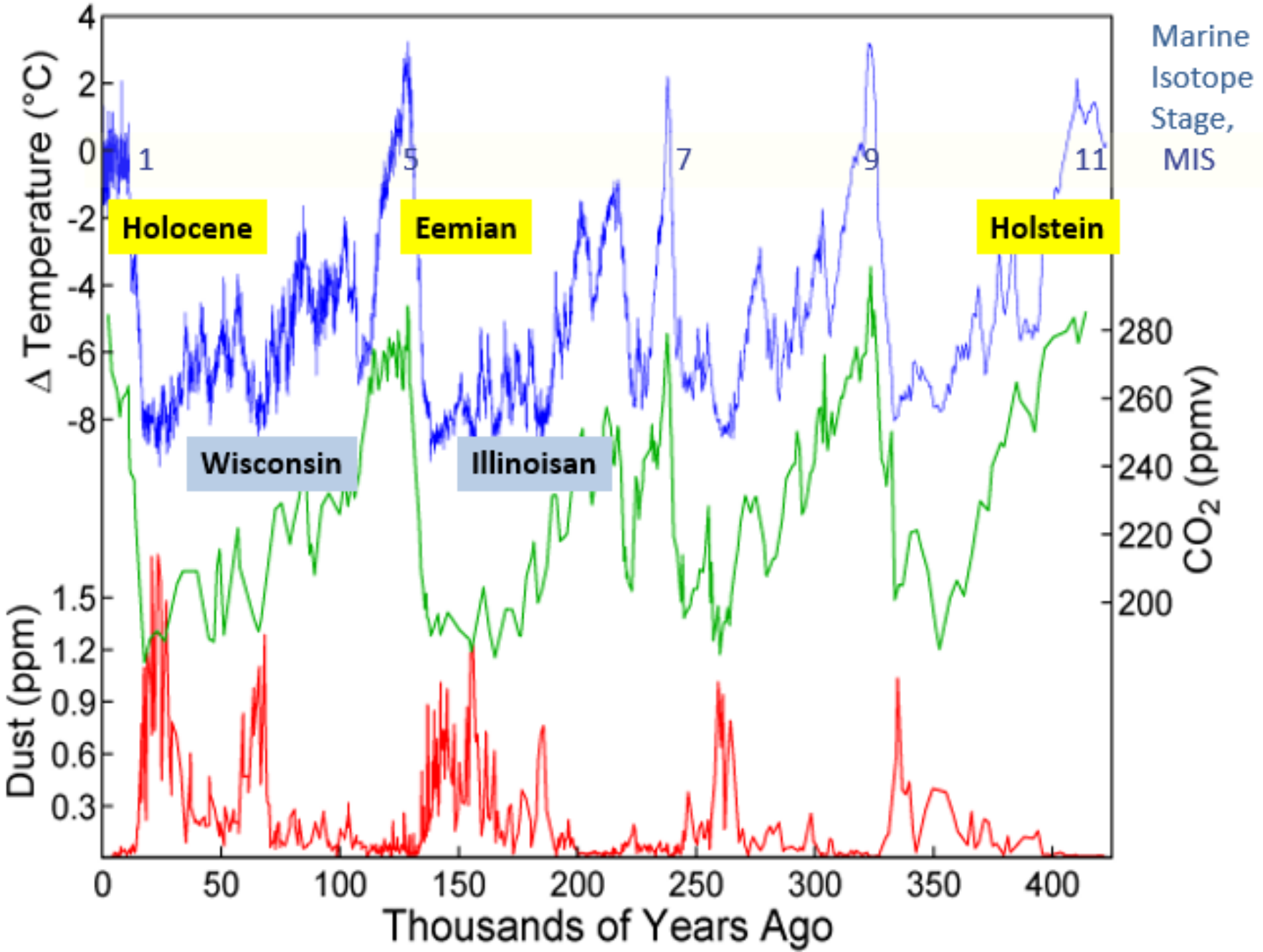
These data demonstrate that <CO2> does not control the temperature.

Y-Axis: **Blue,** Change in Temperature, Delta-T

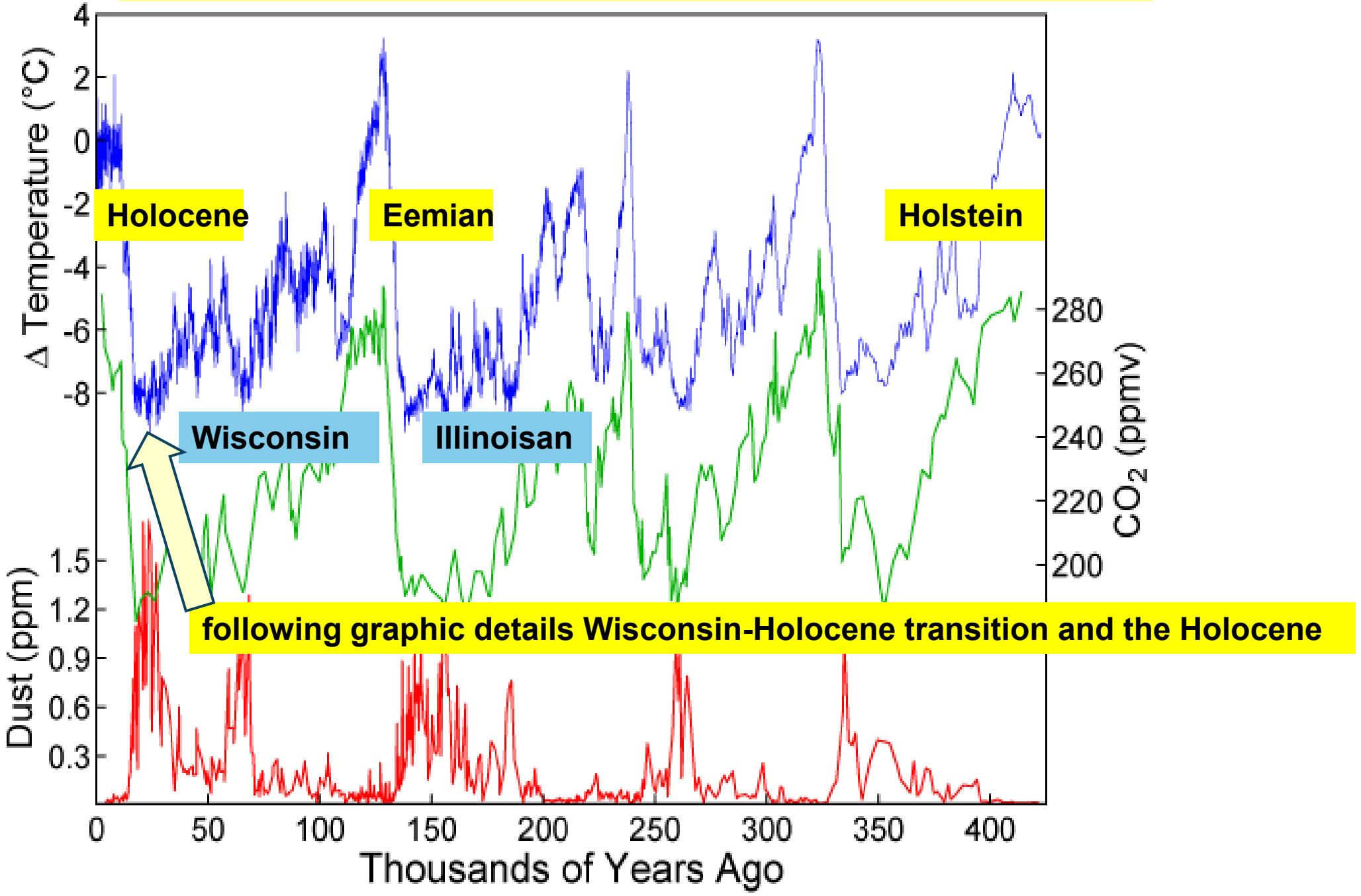
Y-Axis: **Green,** <CO2> ppmv.

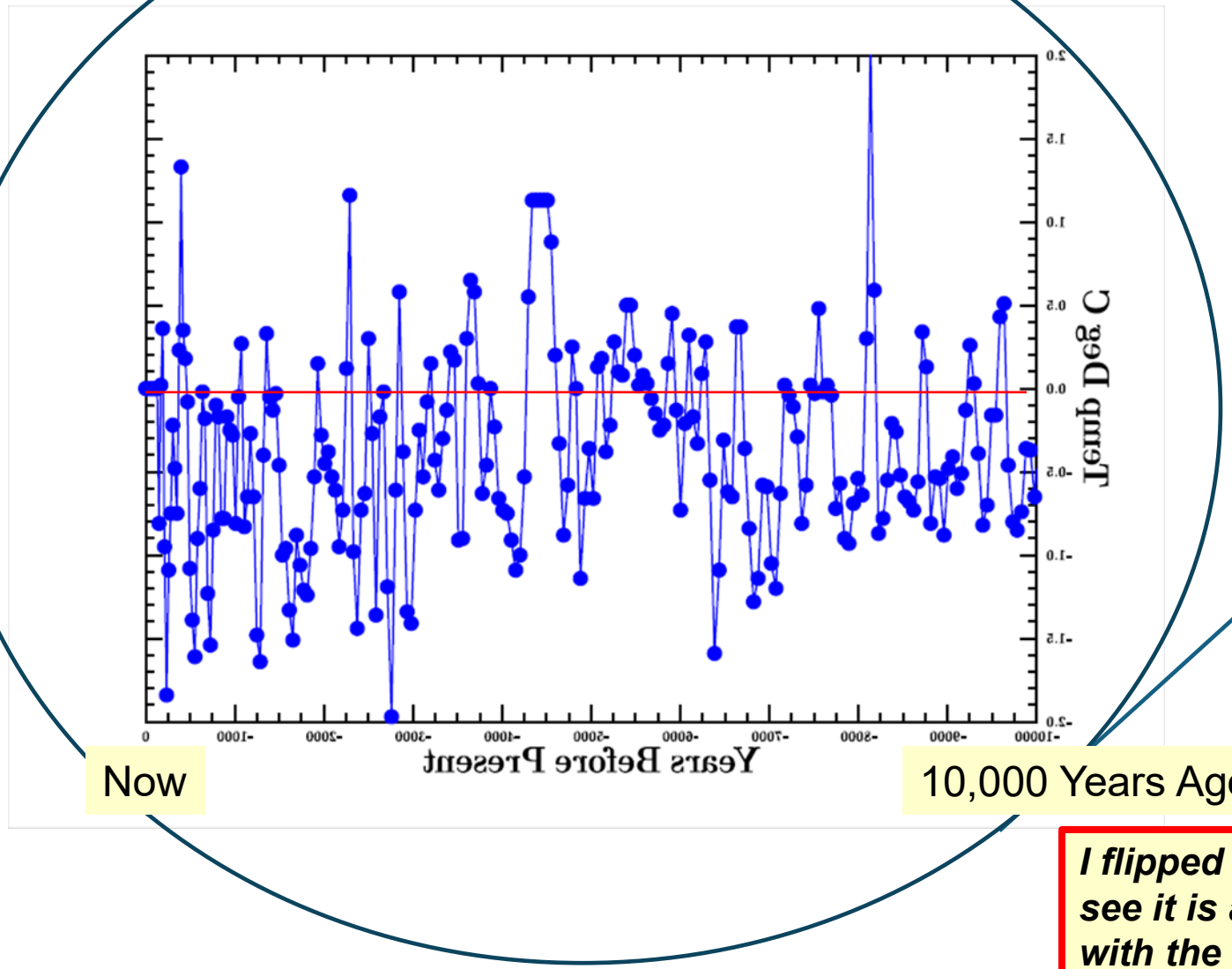
Y-Axis **RED,** Dust.

http://en.wikipedia.org/wiki/File:Vostok-ice-core-petit.png



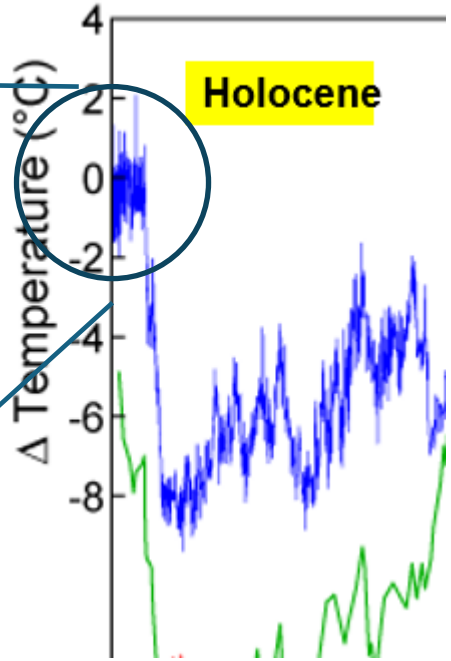
http://en.wikipedia.org/wiki/File:Vostok-ice-core-petit.png





Now

10,000 Years Ago



Y-Axis Delta Temp Deg C.

X-Axis Years before Present.

I flipped the large Holocene plot so that the reader can see it is a blow-up of the Vostok Ice Core temperatures, with the prominent temperature maximum 8000 years ago.

Vostok Ice Core Temperatures from CDIAC, plotted by Dave Tofsted

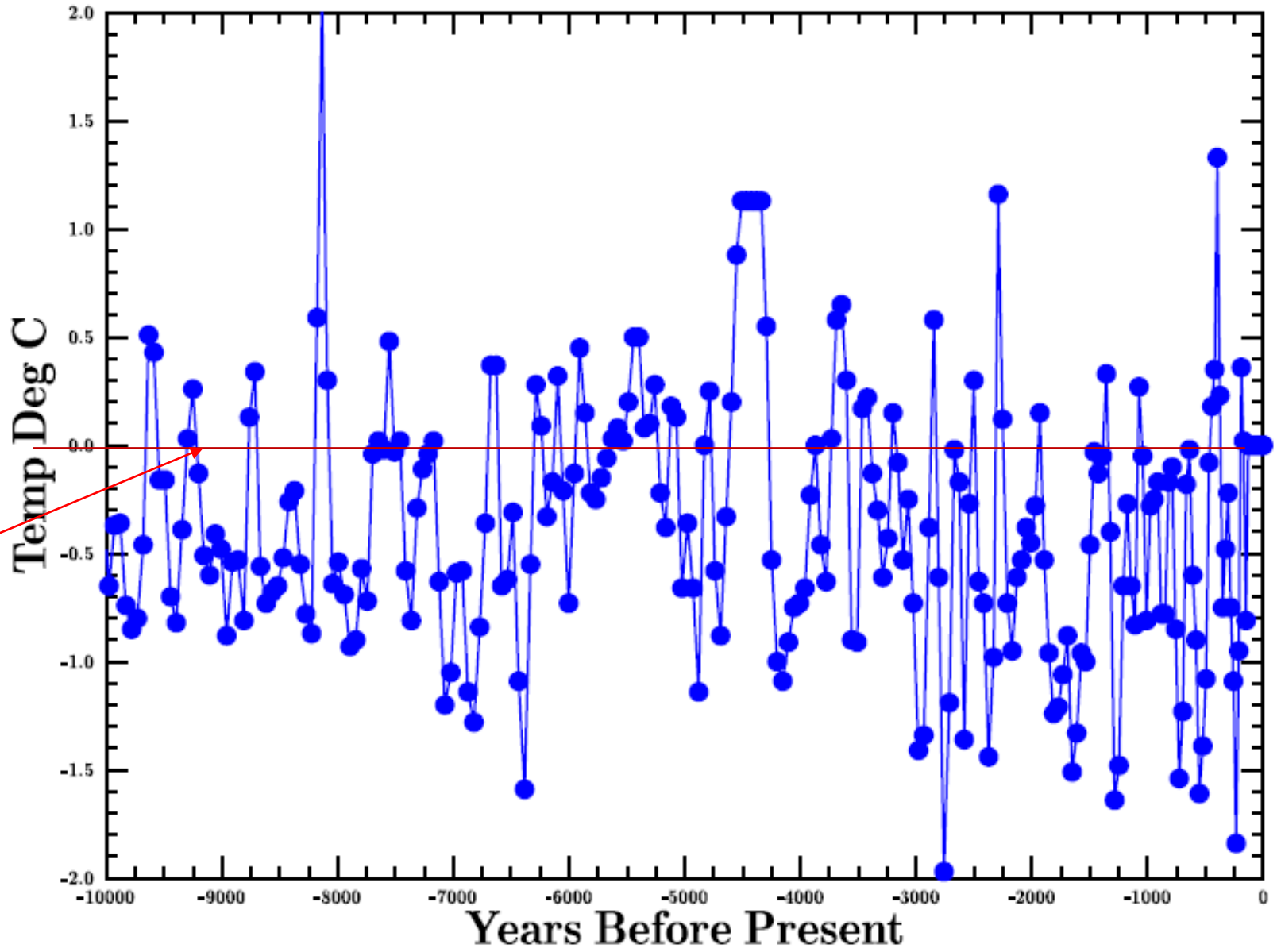
https://cdiac.ess-dive.lbl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat

These are the temperatures from the Vostok Ice Cores, showing the last 10,000 years.

It is difficult to see the justification for declarations of "climate crisis," "climate emergency," and cries of "existential threat."

In fact, there is no threat from human-caused CO2-fueled global warming.

Present temperature is plotted as 0.0C, the temperature base line.



Holocene temperatures from Ice Cores, the last 10,000 years.

Top graphic is from Greenland's GISP2 ice core, in Red

Red horizontal in GISP2 line is ice temp of -30.50C

Bottom graphic is from Antarctica, Vostok ice core, in Blue

Red Horizontal line in Vostok Core, present temperature.

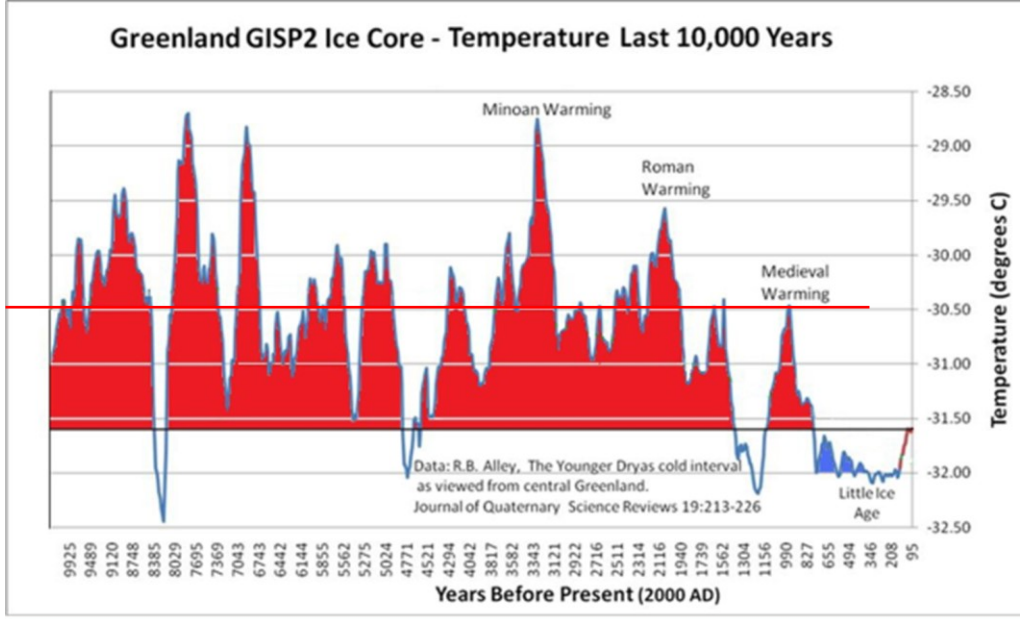
Both plots show a +/- 2C deviation from the red line.

Both plots show that a 1.5C rise from the Little Ice Age minimum is nothing to be concerned about, rather celebrated.

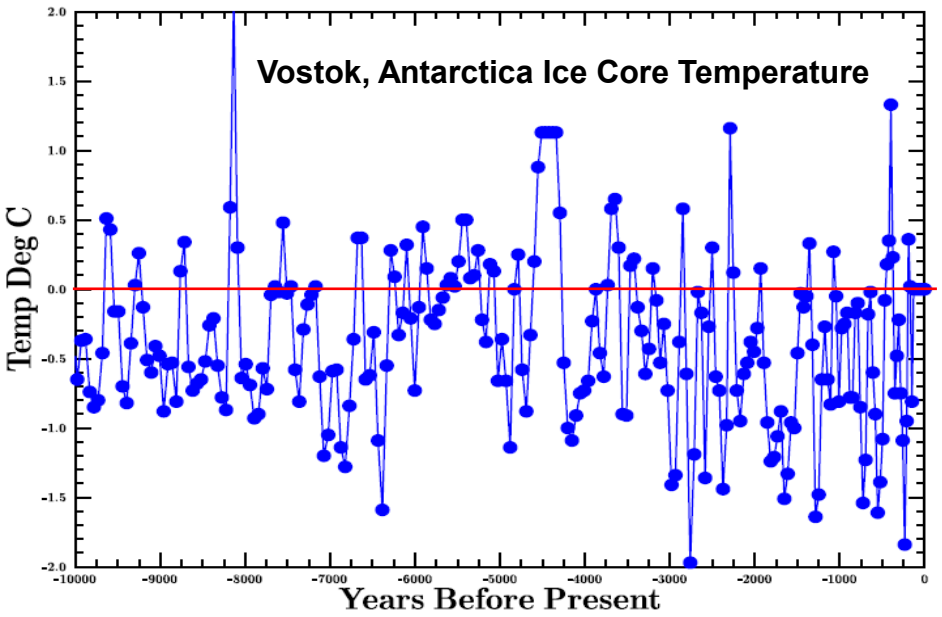
Data show improvements as we warm from the Little Ice Age.

"The Human Condition is improving. Rapidly."

The red line axes in each plot were chosen to show a center line and a line of departure for the +/-2C temperature variations which have occurred over the past 10,000 years, one from the ice cores of each hemisphere.

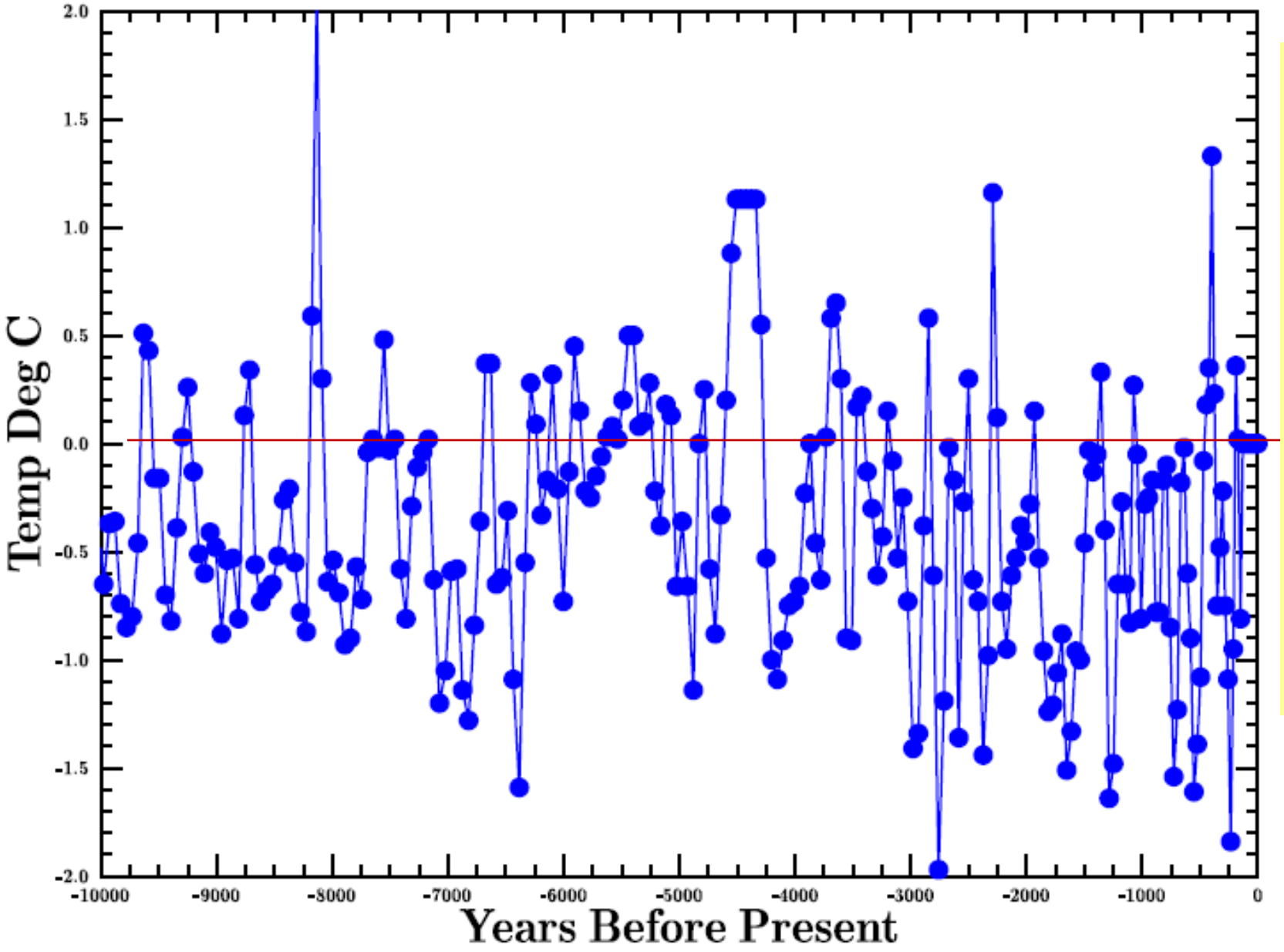


X-Axis, Time Oldest on Left, Present on Right
Y-Axis, Temperature from the O16/O18 ratio , Greenland GISP2 Ice Core
Coldest Down, Warmer Up.



Vostok Ice Core Temperatures from CDIAC, plotted by Dave Tofsted

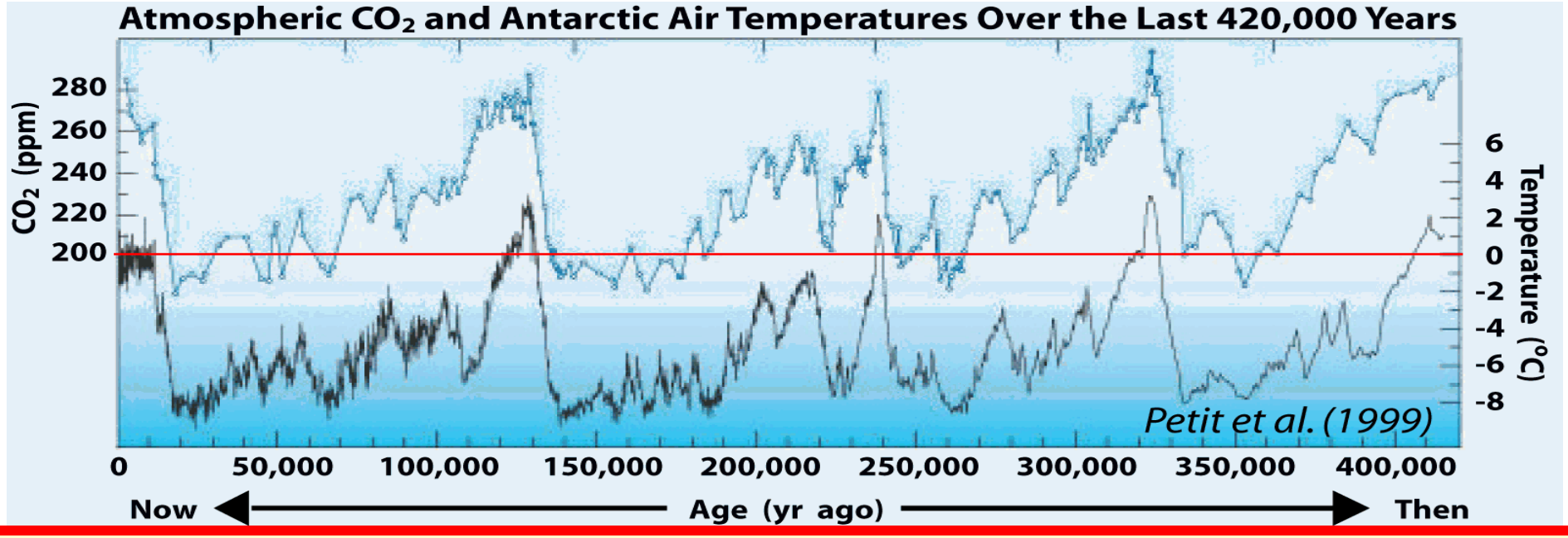
https://cdiac.ess-dive.lbl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat



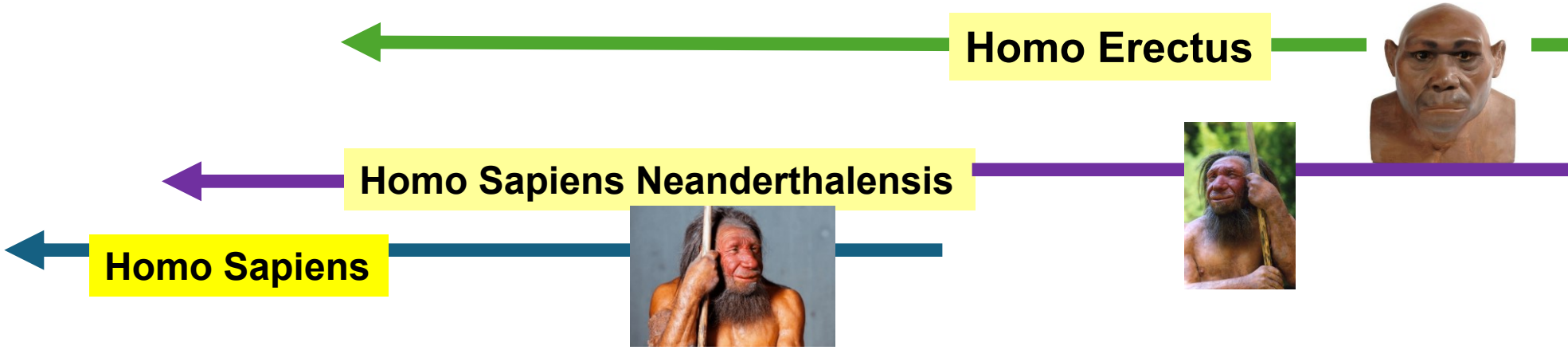
Question:
How can the Alarmists
be so certain that THIS LATEST
temperature fluctuation is
a CATASTROPHIC ONE?

Question answers itself.
There is nothing unusual about
the present temperature or rate
of change of temperature.

https://casf.me/wp-content/uploads/2022/08/Data-show-that-a-little-more-warming-is-NOT-the-EXISTENTIAL-Threat-claimed-by-Alarmists_4_Aug_2021-Edited-23-Aug-20

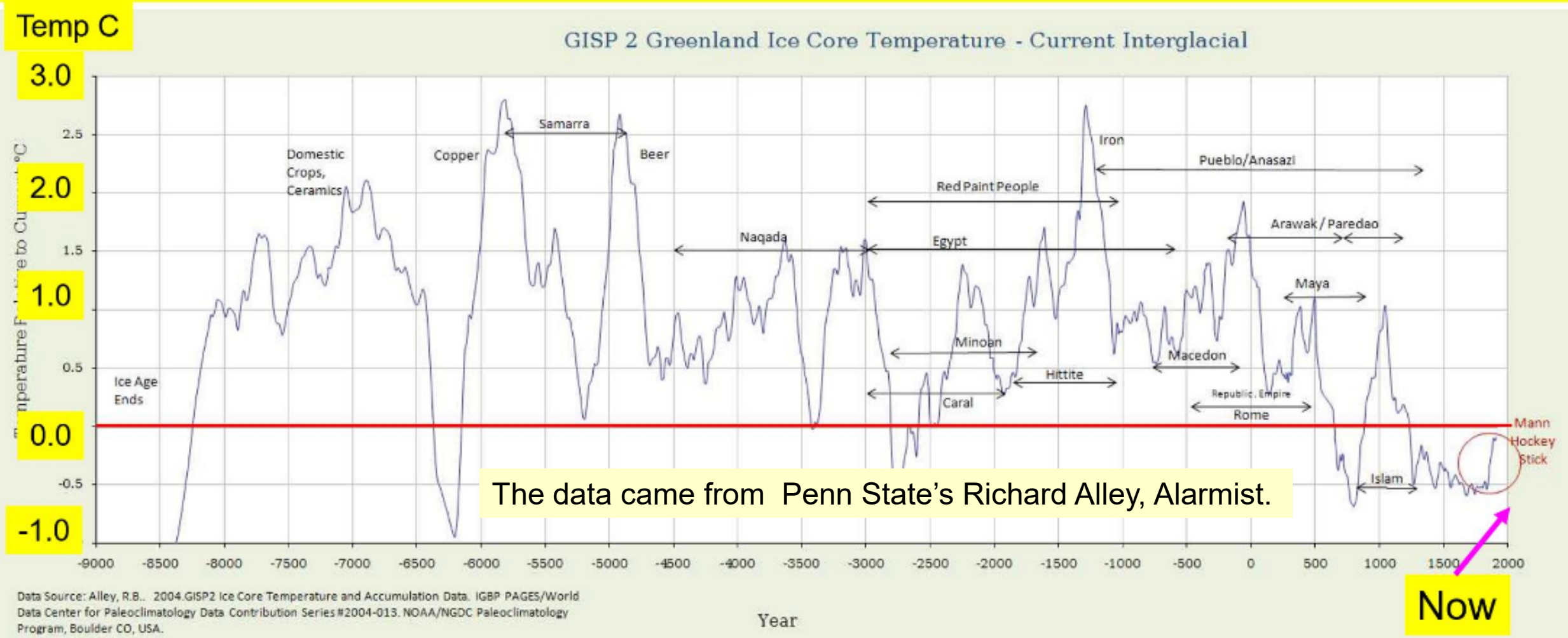


How can the present rate of climate change be a “Climate Emergency” and “An Existential Threat,” when present temperatures are not nearly as warm as 1000, 2000 and 8000 years ago?
When Homo Sapiens survived the Eemian Interglacial, 130,000 years ago, & MIS7 interglacial 250,000 years ago?
When Neanderthals survived the interglacials of 125,000, 250,000, 330,000 and 410,000 years ago?



https://wattsupwiththat.files.wordpress.com/2011/07/alley-2004.jpg

Times in the recent past, temperature trace above the red line, show times in the past that were hotter than today.

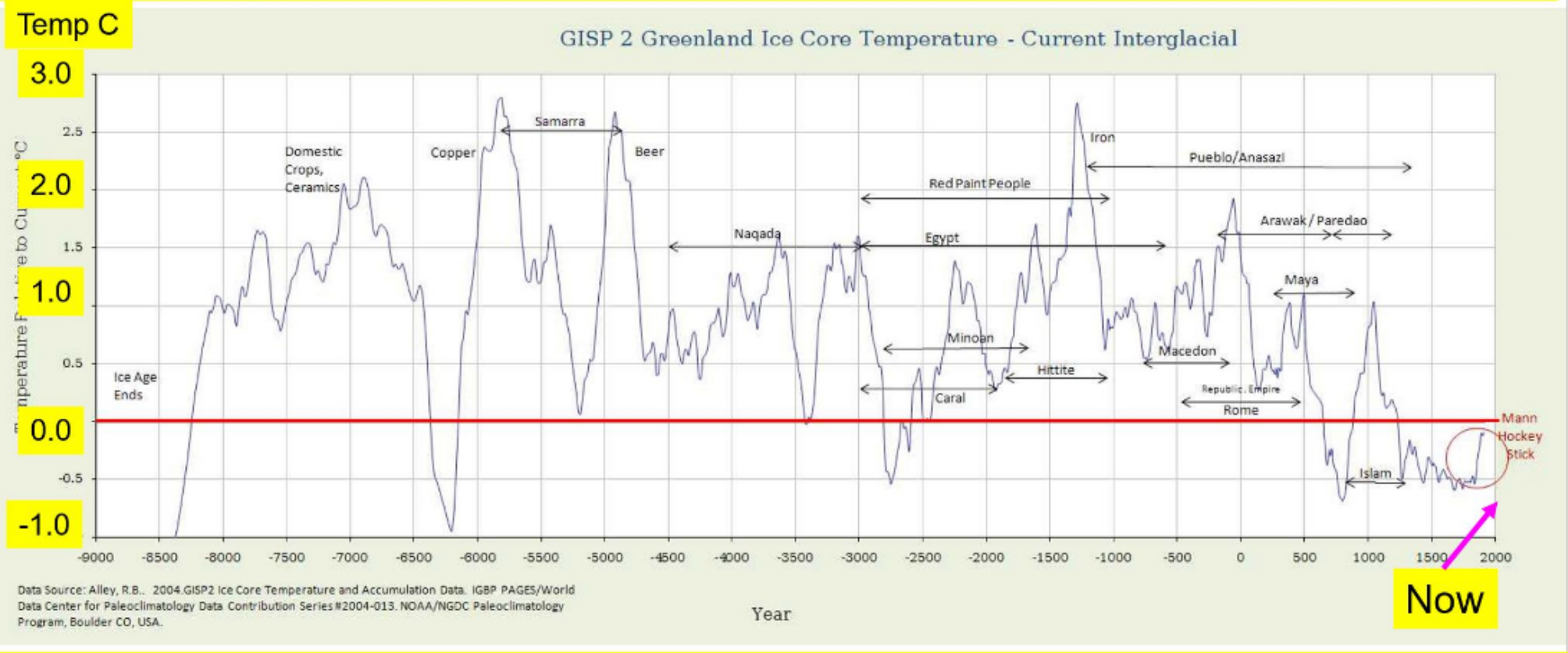


The data came from Penn State's Richard Alley, Alarmist.

If you understand this chart, you will see the ignorance of the climate Alarmists' cries of "Existential Threat"

https://wattsupwiththat.files.wordpress.com/2011/07/alley-2004.jpg

Times in the recent past, temperature trace above the red line, show times in the past that were hotter than today.

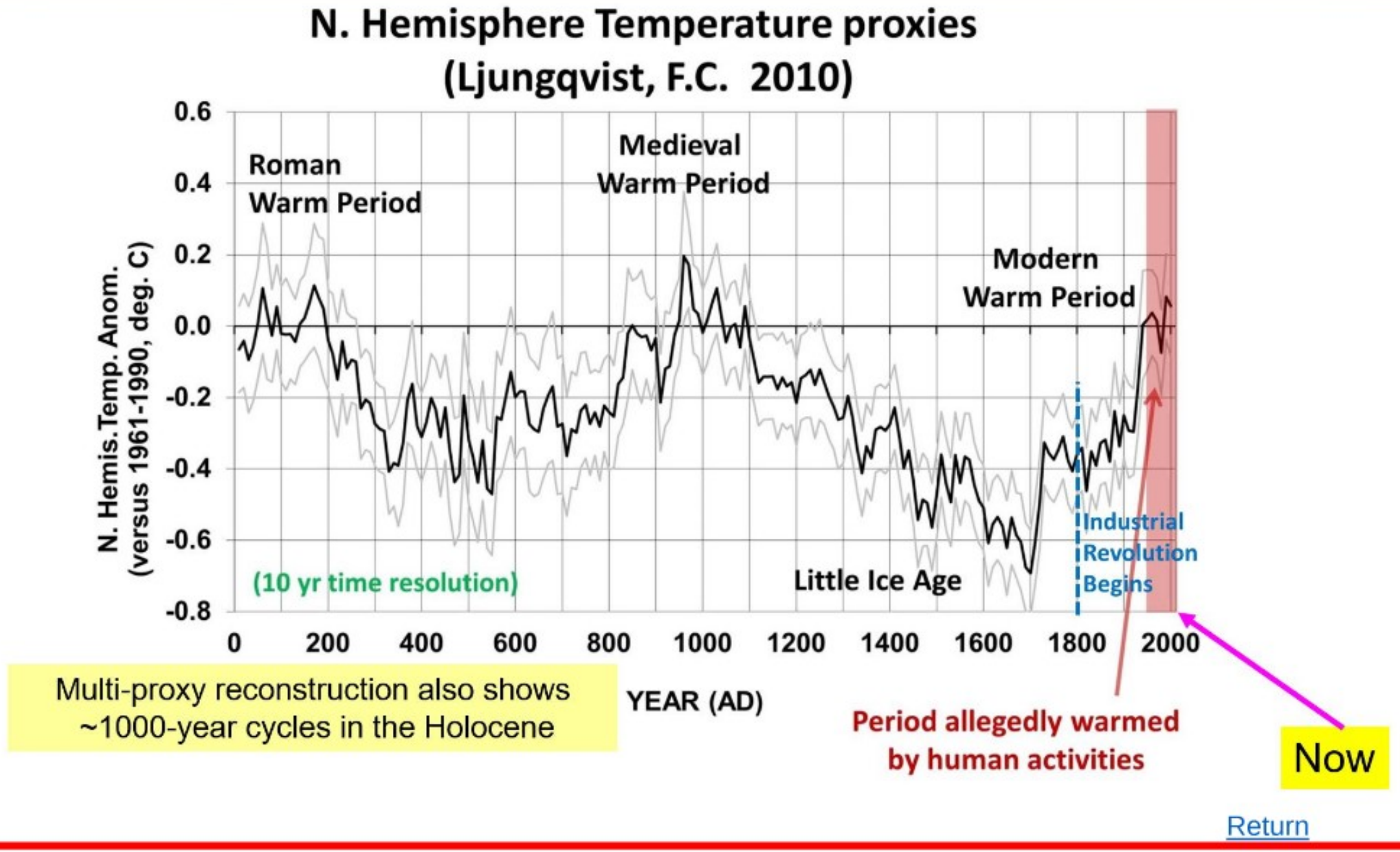


If you understand this chart, you will see the ignorance of the climate Alarmists' cries of "Existential Threat"

<u>Question:</u>
How can the Alarmists
be so certain that THIS LATEST temperature fluctuation is a CATASTROPHIC ONE?

<u>Question answers itself.</u>
There is nothing unusual about the present temperature or rate of change of temperature.

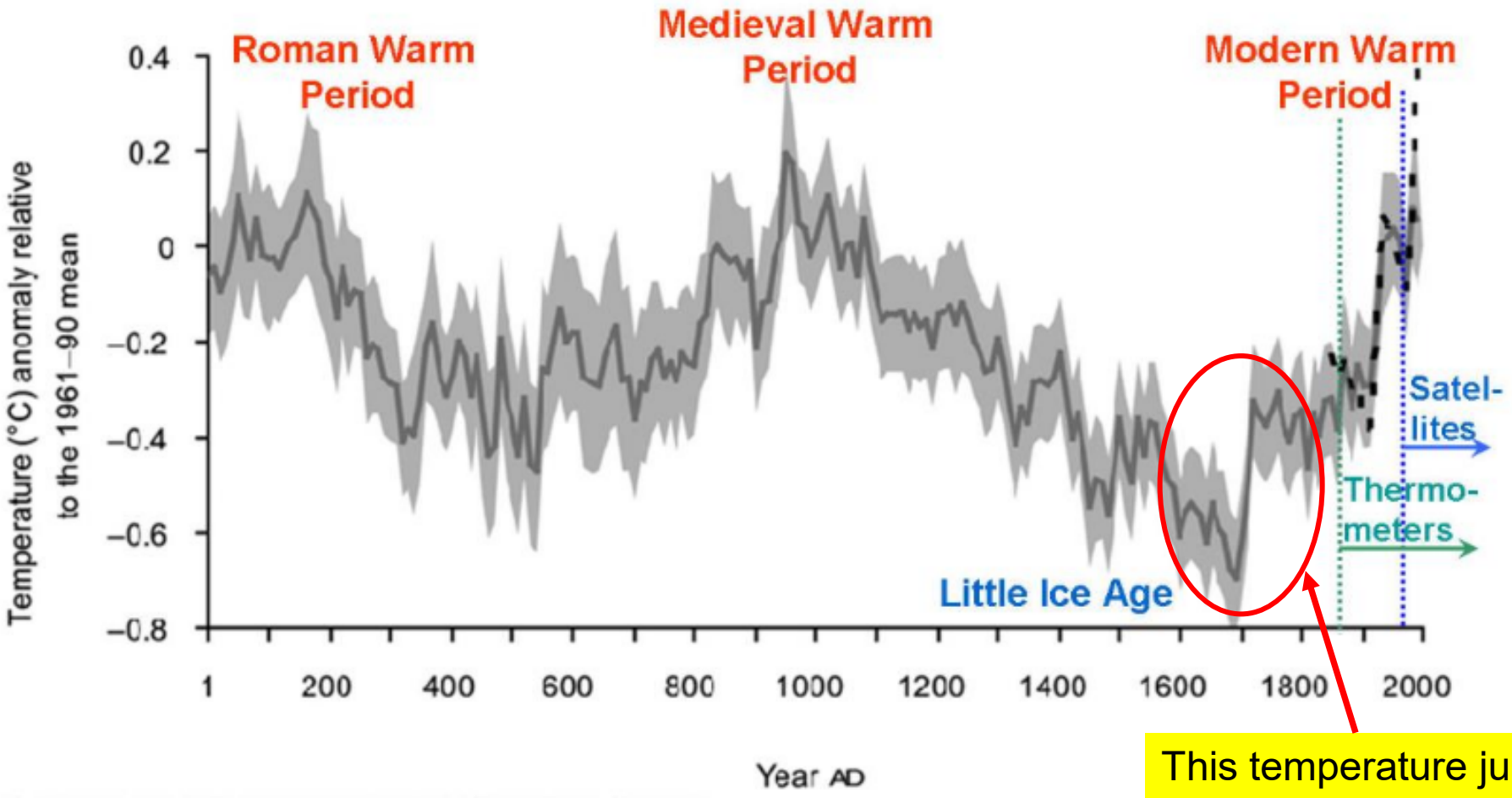
http://www.drroyspencer.com/wp-content/uploads/2000-years-of-global-temperatures-industrial-revolution-start.jpg



Return

https://www.drroyspencer.com/wp-content/uploads/Spencer_EPW_Written_Testimony_7_18_2013_updated.pdf

Temperature Reconstruction* for N. Hemisphere, 1 - 2000 AD
Shows Modern Warm Period Not Exceptional



This temperature jump MUST have been caused by natural forces.

*Ljungqvist, F.C. 2010. A new reconstruction of temperature variability in the extra-tropical Northern Hemisphere during the last two millennia. Geografiska Annaler: Physical Geography, Vol. 92 A(3), pp. 339-351, September 2010. DOI: 10.1111/j.1468-0459.2010.00399.x

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Data from Austria's Professor Patzelt:

Top line shows May to September Summer Temperatures.

Patzelt's data were derived from analyzing the wood from trees buried in lateral moraines, glacial deposits on the sides of Austrian Alpine glaciers.

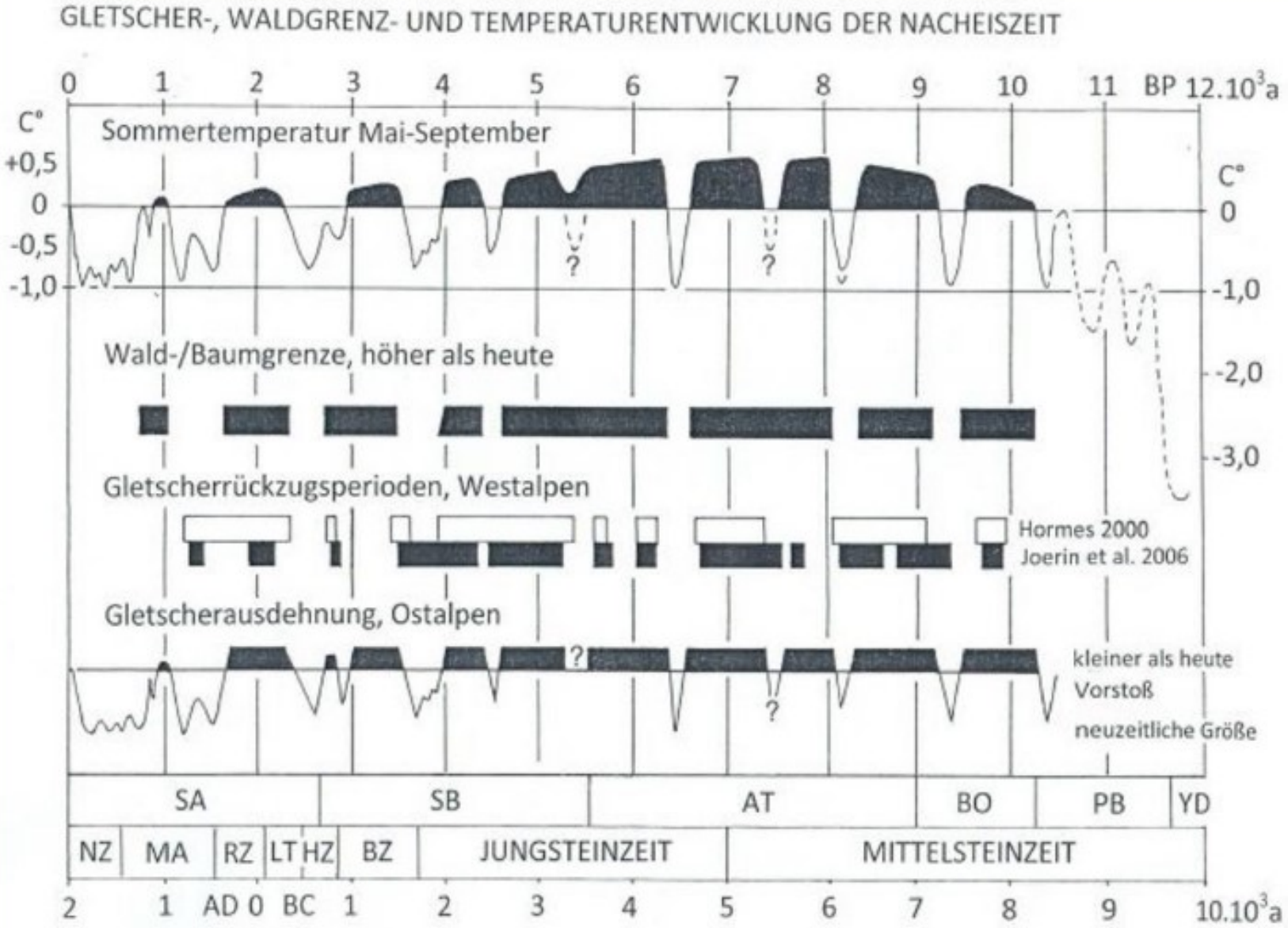
There are about 14 warm periods in the last 12,000 years.

These show the "thousand year" cycles noted by Gerard Bond

Maximum summer temperatures were ~8000 years ago.

There is NO "CO2-warming" effect in these data.

https://notrickszone.com/2020/01/25/world-leading-alps-glaciologist-shows-todays-climate-vegetation-and-glacier-situation-nothing-special/



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Salient Points:

Professor Patzelt's analysis and data provide a time series of summer temperatures over the entirety of the warmest centuries of the Holocene Interglacial based on data from trees in lateral moraines in the Austrian Alps.

Patzelt's data show peak summer temperatures occurred about 8,000 years ago.

These "8,000 years ago" results closely match Antarctic Ice Core data from the Vostok Ice Cores.

The "8,000 years ago" results also seem to match up with the Arctic ice cores from Greenland, the GISP2 data set.

Having very similar results from Antarctica and Greenland in the Arctic North lends credence to all the methods.

Neither the lateral moraine-derived time series from trees in the Austrian Alps nor any of the ice cores show the slightest influence of increasing atmospheric <CO2>

Together the three methodologies all indicate there is no threat of Climate Armageddon from increasing <CO2>.

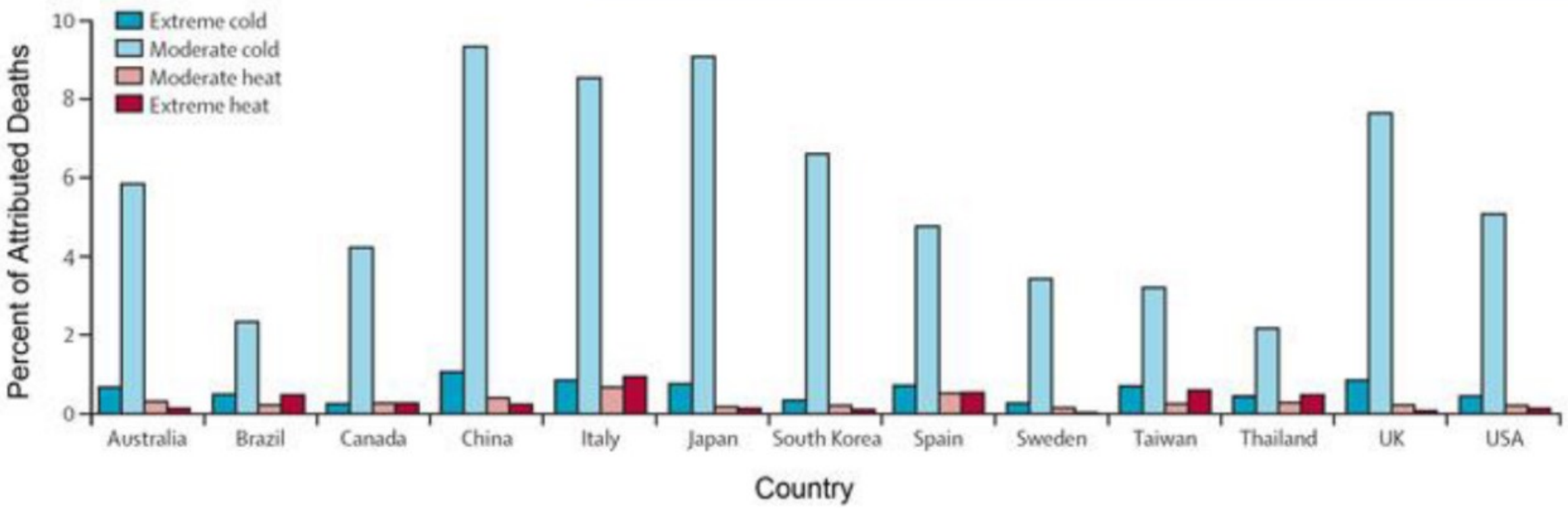
Return

Cold waves kill many more people than heat waves.

If the Alarmists were correct, there'd be a lot more deaths from heat than cold. The Climate Alarm makes no sense.

Percent of Deaths Due to Moderate and Extreme Episodes of Heat and Cold

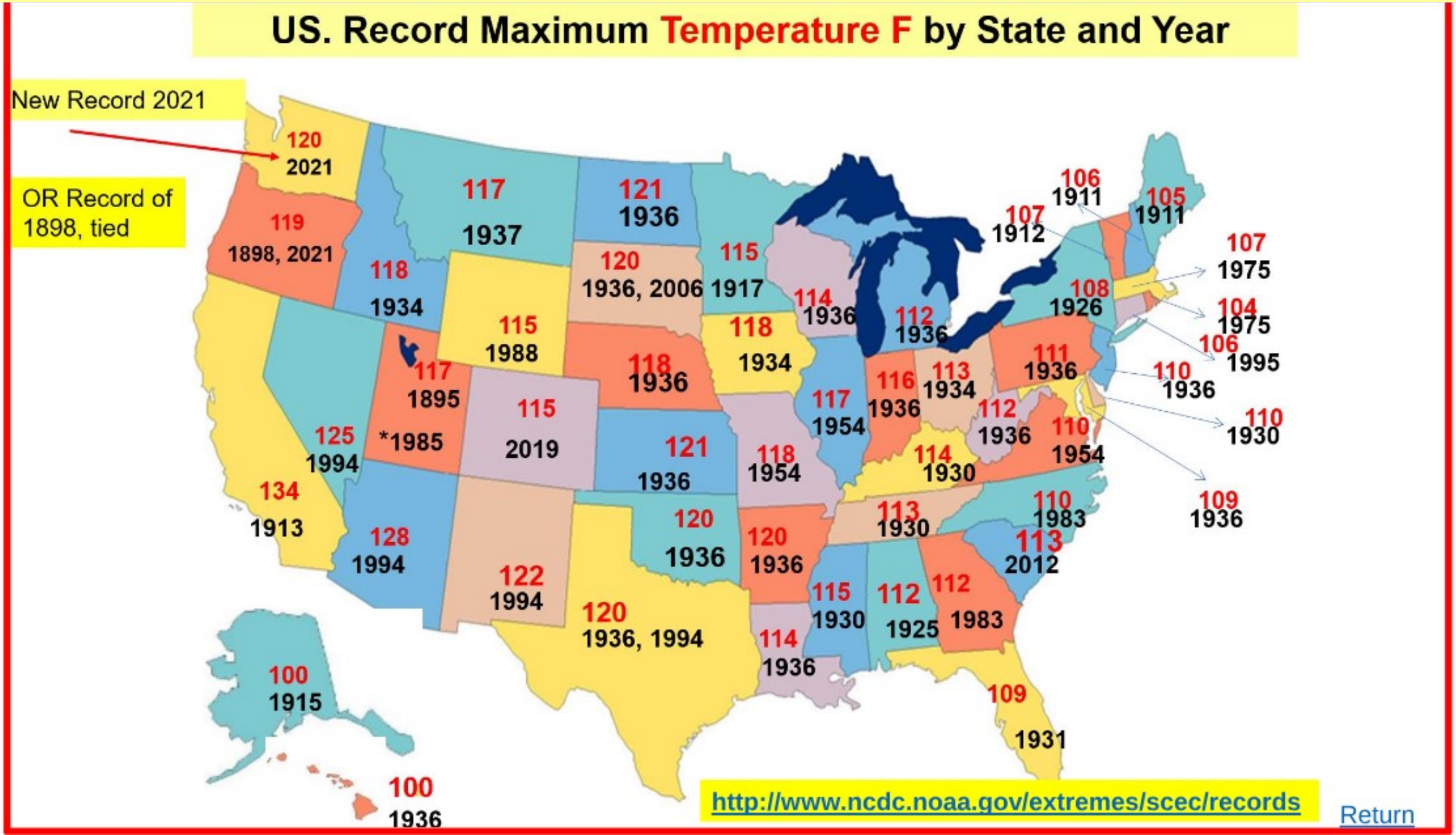
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)62114-0/fulltext



Fraction of all-cause mortality attributable to moderate and extreme hot and cold temperature by country. **(Source: Gasparrini et al., 2015).**

Return

https://casf.me/wp-content/uploads/2024/02/Top-Dozen-Graphics_updated.pdf



https://casf.me/wp-content/uploads/2024/02/Top-Dozen-Graphics_updated.pdf

Salient Points:

This graphic, based on NOAA's own temperature extremes data base, directly confounds and contradicts the notion that increasing <CO2> is leading to increasingly warmer temperatures.

NB, the peak in the number of the 50 states when the extreme maximum temperature is in the 1930s, when <CO2> was ~307 Parts per Million, PPM. Today <CO2> is about 417 PPM.

A lot fewer states reached their extreme maximum temperatures in the 2000s

http://scienceandpublicpolicy.org/images/stories/papers/originals/surface_temp.pdf

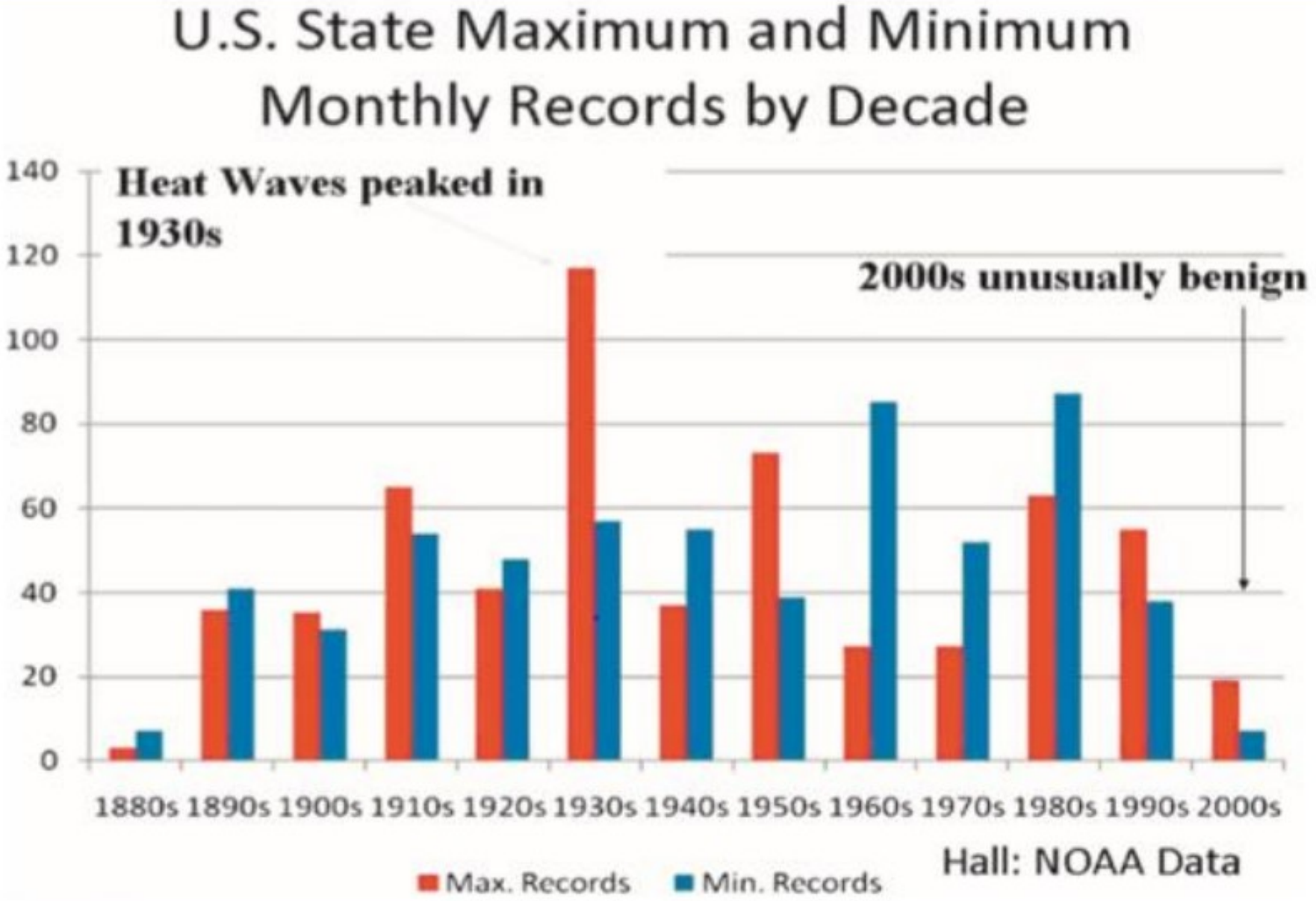
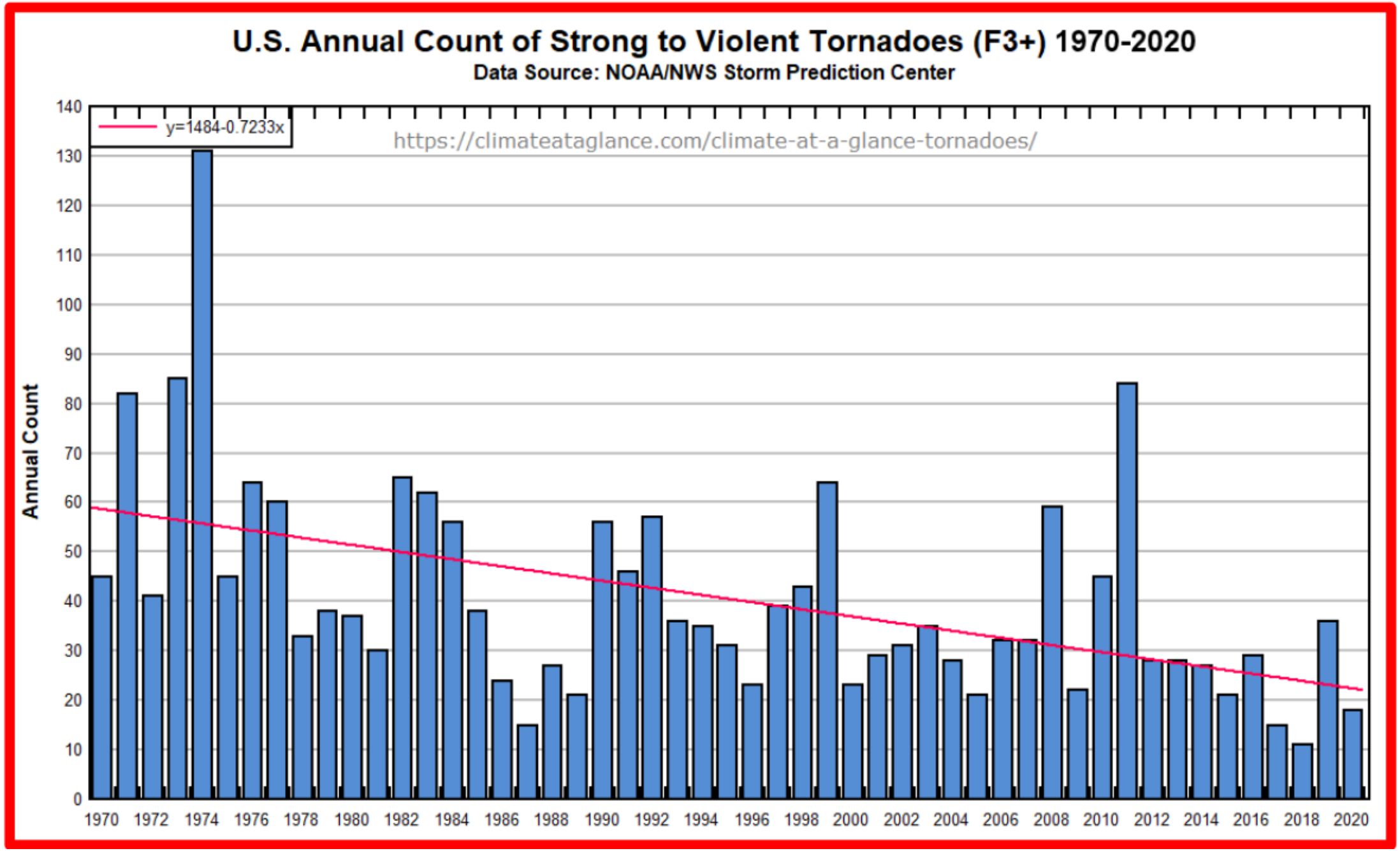


FIGURE 19 United States all-time monthly record lows and highs by decade. Compiled by Hall from NOAA NCDC data.

Return

Now, several non-temperature data sets from the web site showing recent time series show no tendency for imminent climate catastrophe.

https://climateataglance.com/climate-at-a-glance-tornadoes/



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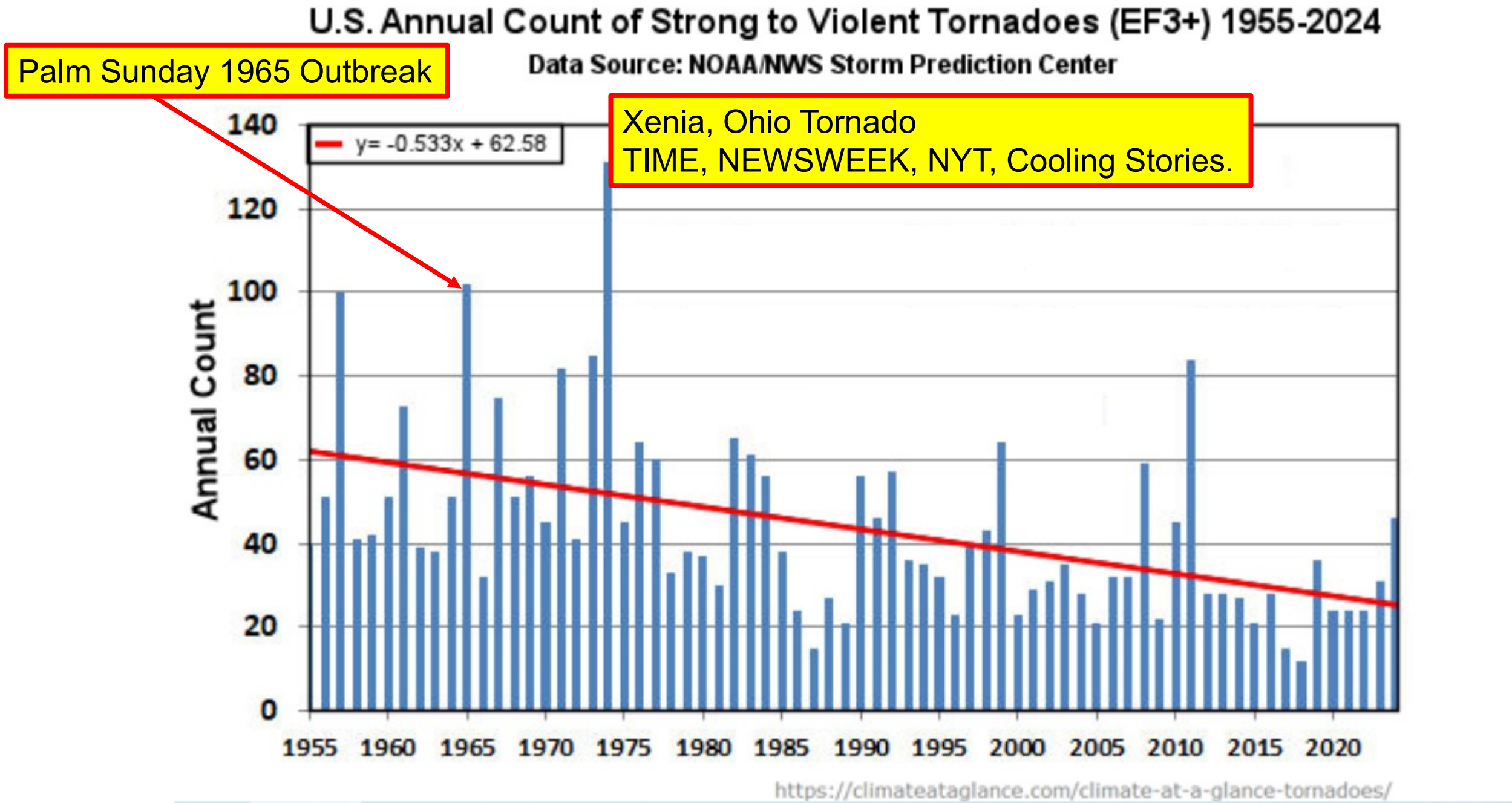
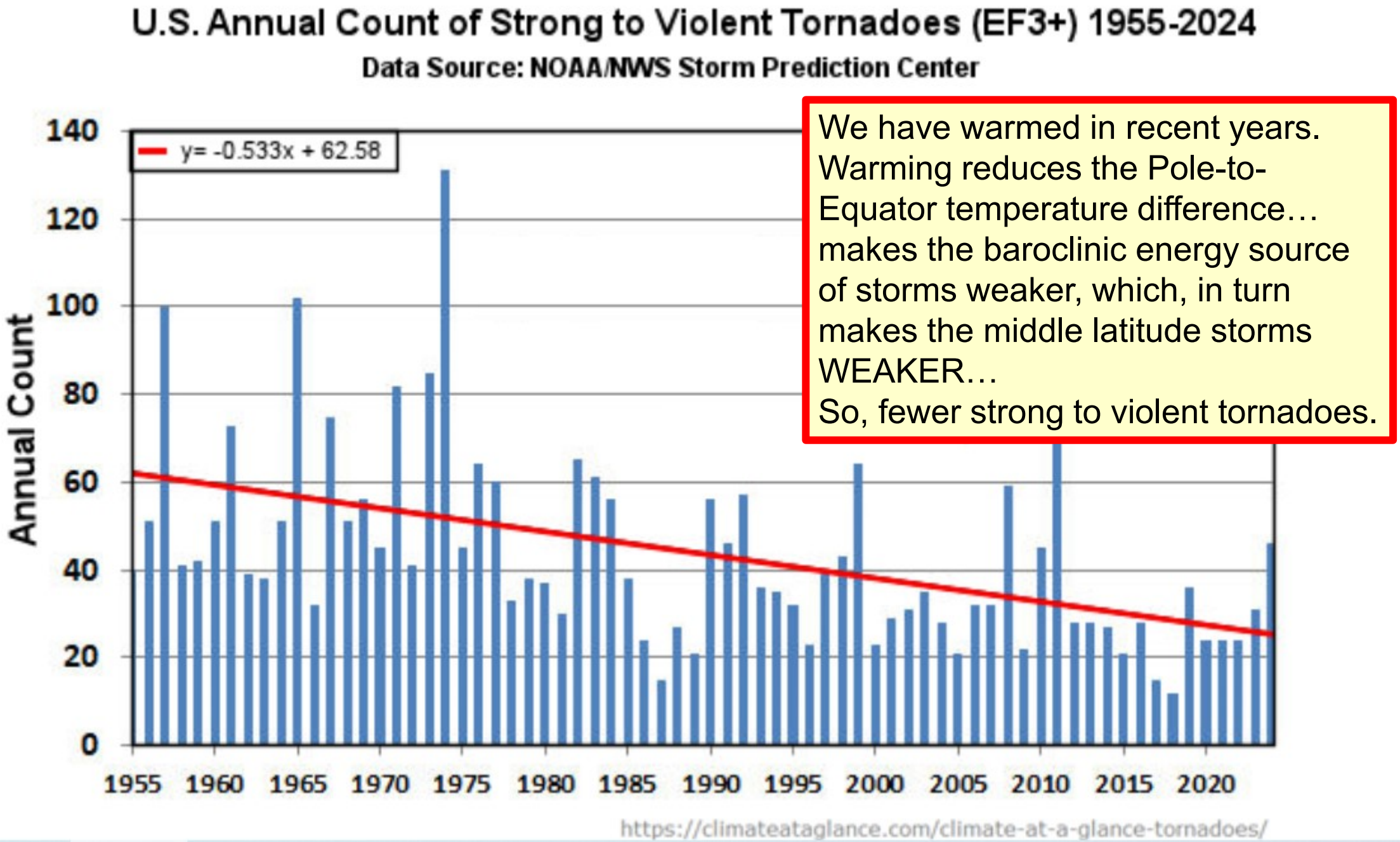
https://climateataglance.com/climate-at-a-glance-tornadoes/



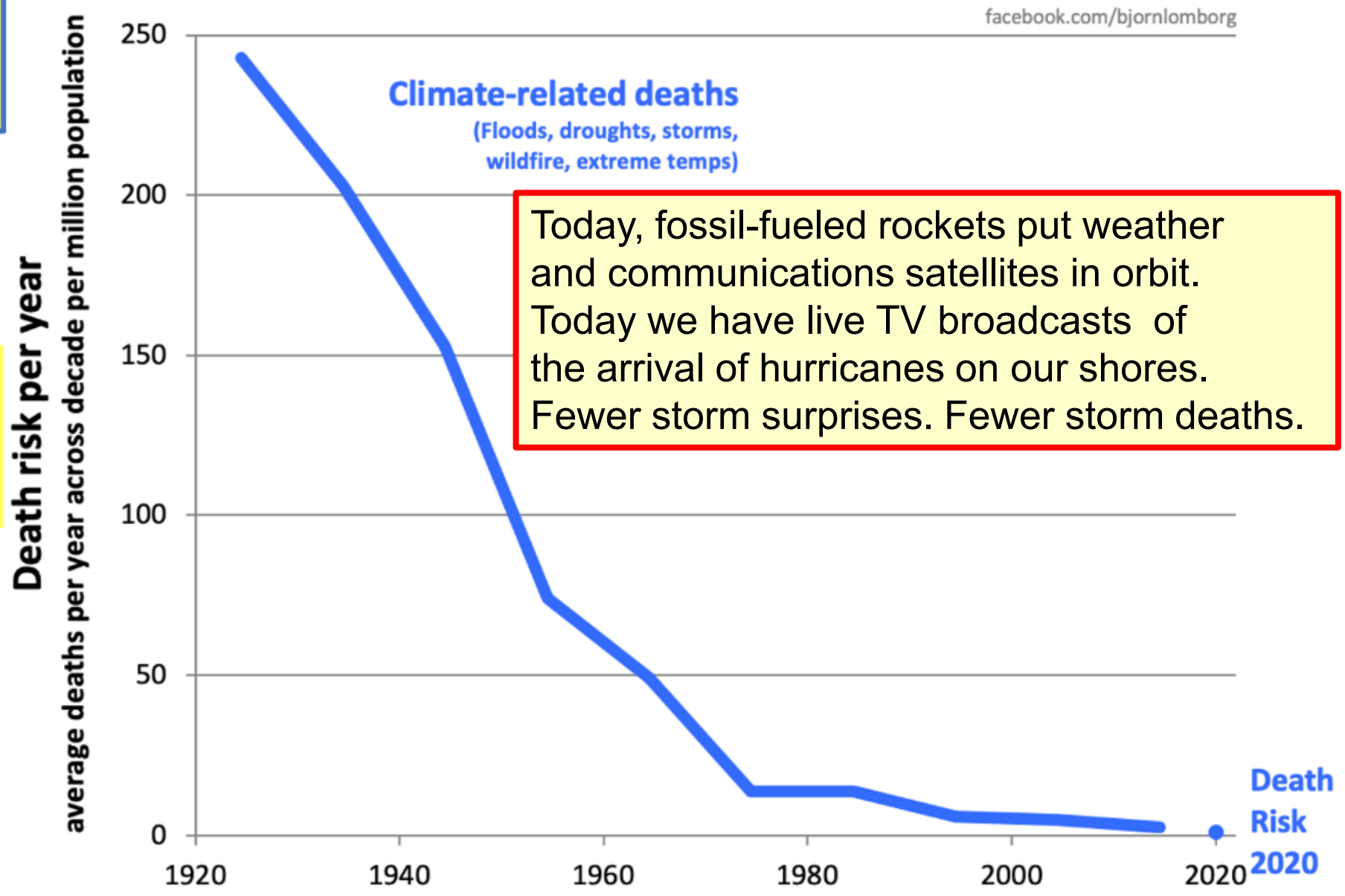
https://climateataglance.com/climate-at-a-glance-tornadoes/



After 100 years of climate change, 'climate related deaths' approach zero

https://climaterealism.com/wp-content/uploads/2021/01/climate-related-deaths-1920-2020.png

Climate-related Death Risk 1920-2020



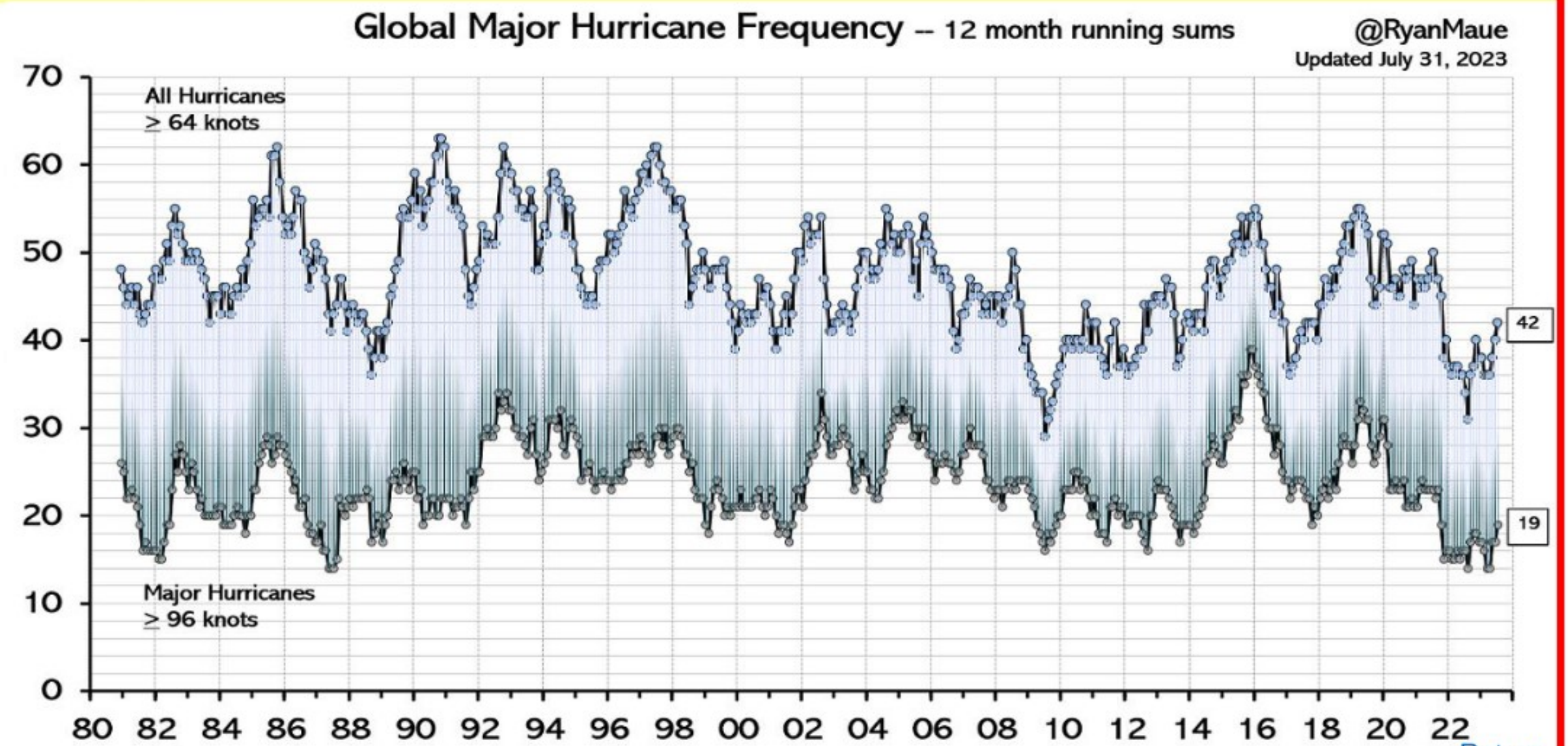
Today, fossil-fueled rockets put weather and communications satellites in orbit. Today we have live TV broadcasts of the arrival of hurricanes on our shores. Fewer storm surprises. Fewer storm deaths.

OFDA/CRED International Disaster Database, www.emdat.be, deaths averaged over decades 1920-29, 1930-1939, ... 2010-2019, with data from 2020, as start of next decade, accessed January 1, 2021

Return

https://climatlas.com/tropical/global_major_freq.png

The Center for Climate and Energy Solutions: "Scientists…are certain the intensity and severity of hurricanes will continue to increase."



Return

https://casf.me/wp-content/uploads/2024/02/Top-Dozen-Graphics_updated.pdf

Salient Points:

Ryan Maue has been keeping track of Hurricanes, Typhoons, and Tropical Storms.
His methodology uses modern satellite detection and wind speed determinations
of the number and strength of these systems since 1980.

Examination of Maue's charts shows an inter-decadal variability clearly at odds with the monotonic increase in <CO2> ongoing since about 1800.

Alarmist claims that the intensity of severity of hurricanes is increasing is shown to be false.

Clearly, the alarmists have no idea what they are talking about.

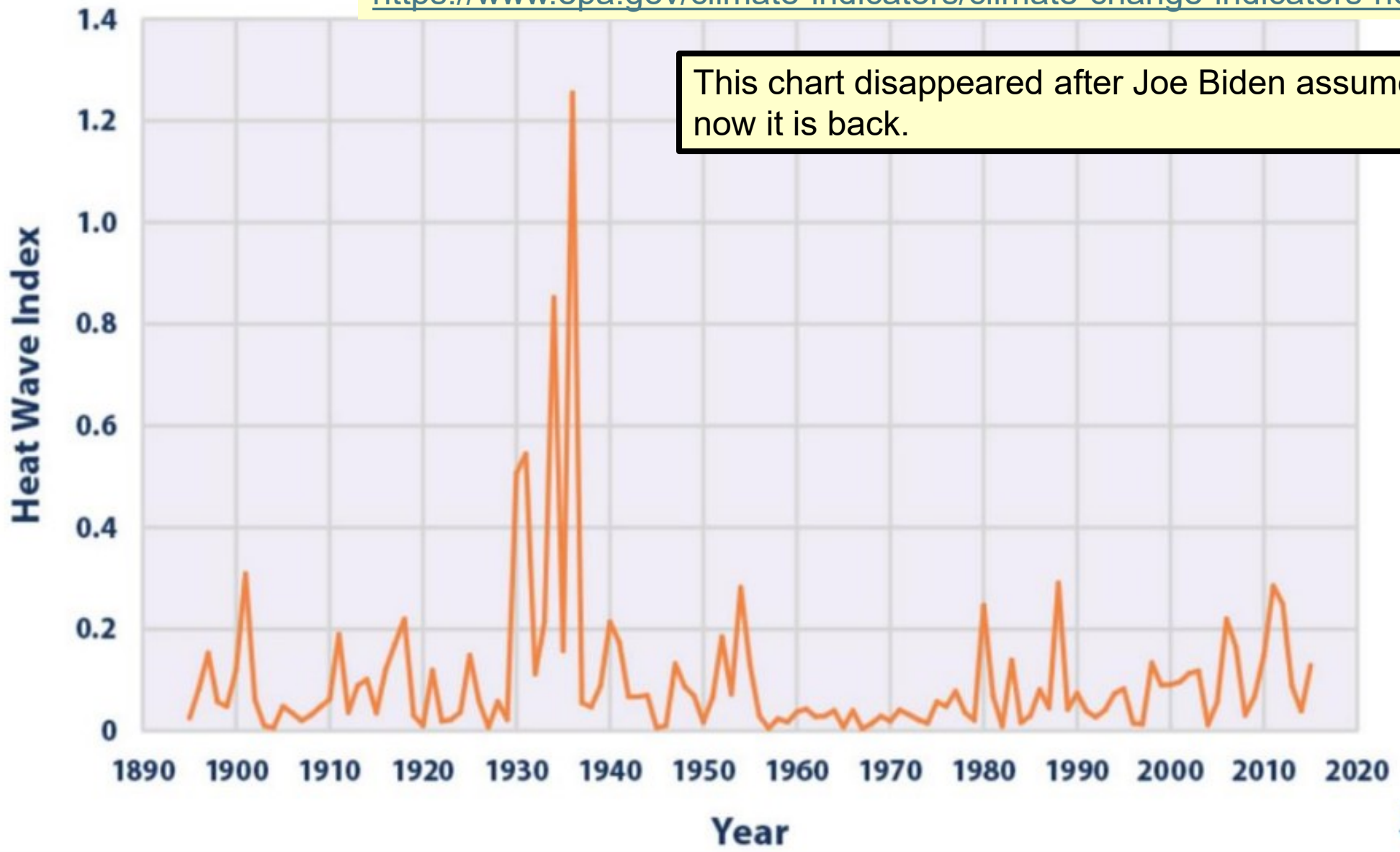
Ryan Maue's data and time series charts clearly falsify the alarmist claims.

Here is a clearer view of the EPA's Heat Wave Index showing the temperatures collected back to the 1890s.

EPA United States Environmental Protection Agency

https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves

This chart disappeared after Joe Biden assumed office; now it is back.



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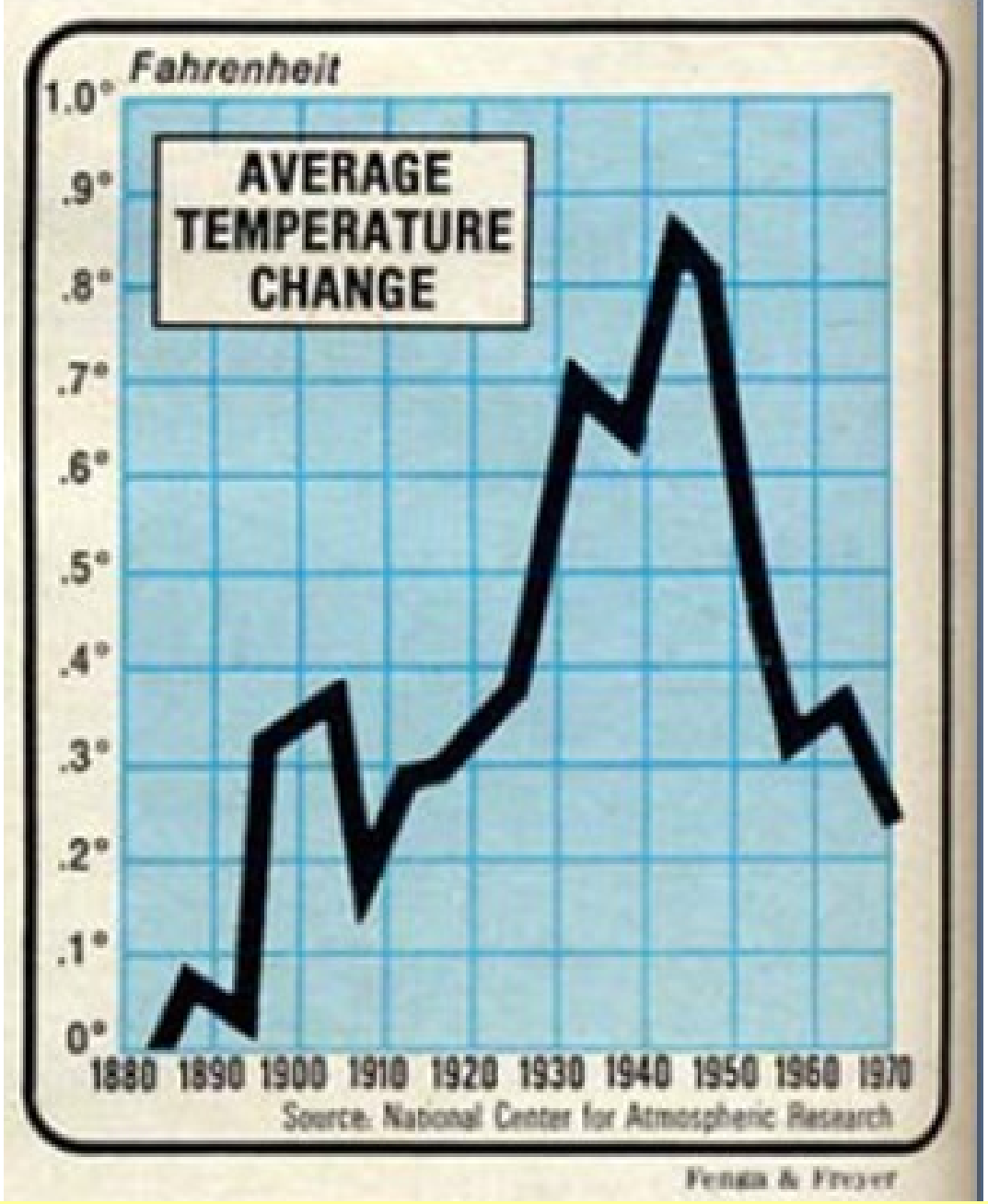
SIDEBAR

From the 1940s to the 1970s CO_2 emissions soared yet temperatures plummeted!

The next several slides show time series of Northern Hemisphere Temperature and emissions of CO_2.

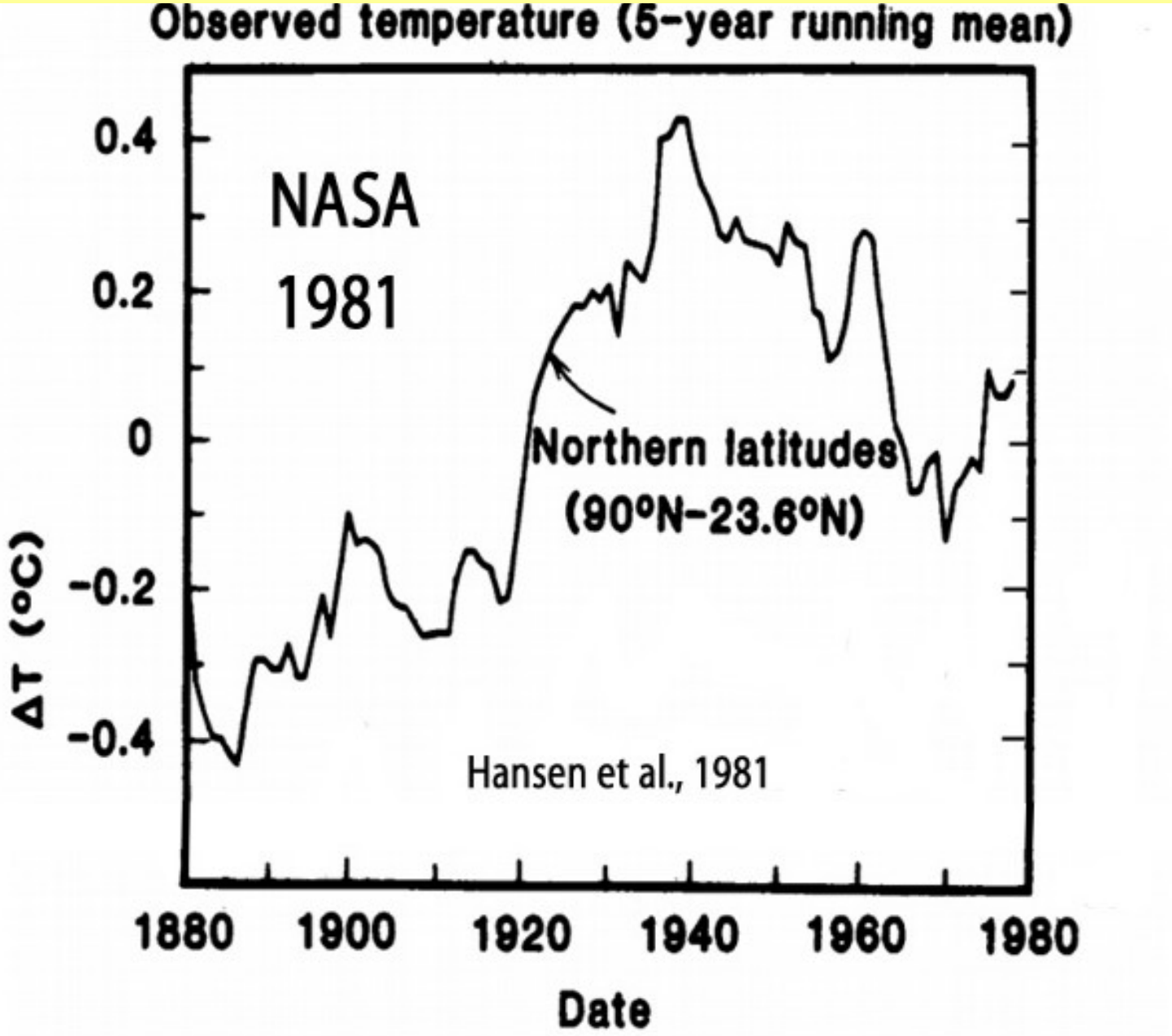
Note especially the emissions data from the Post-WW2 year of 1946, to the Great Climate Shift of 1976.

This line of data analysis seems to be missing from the Energy Department Report.

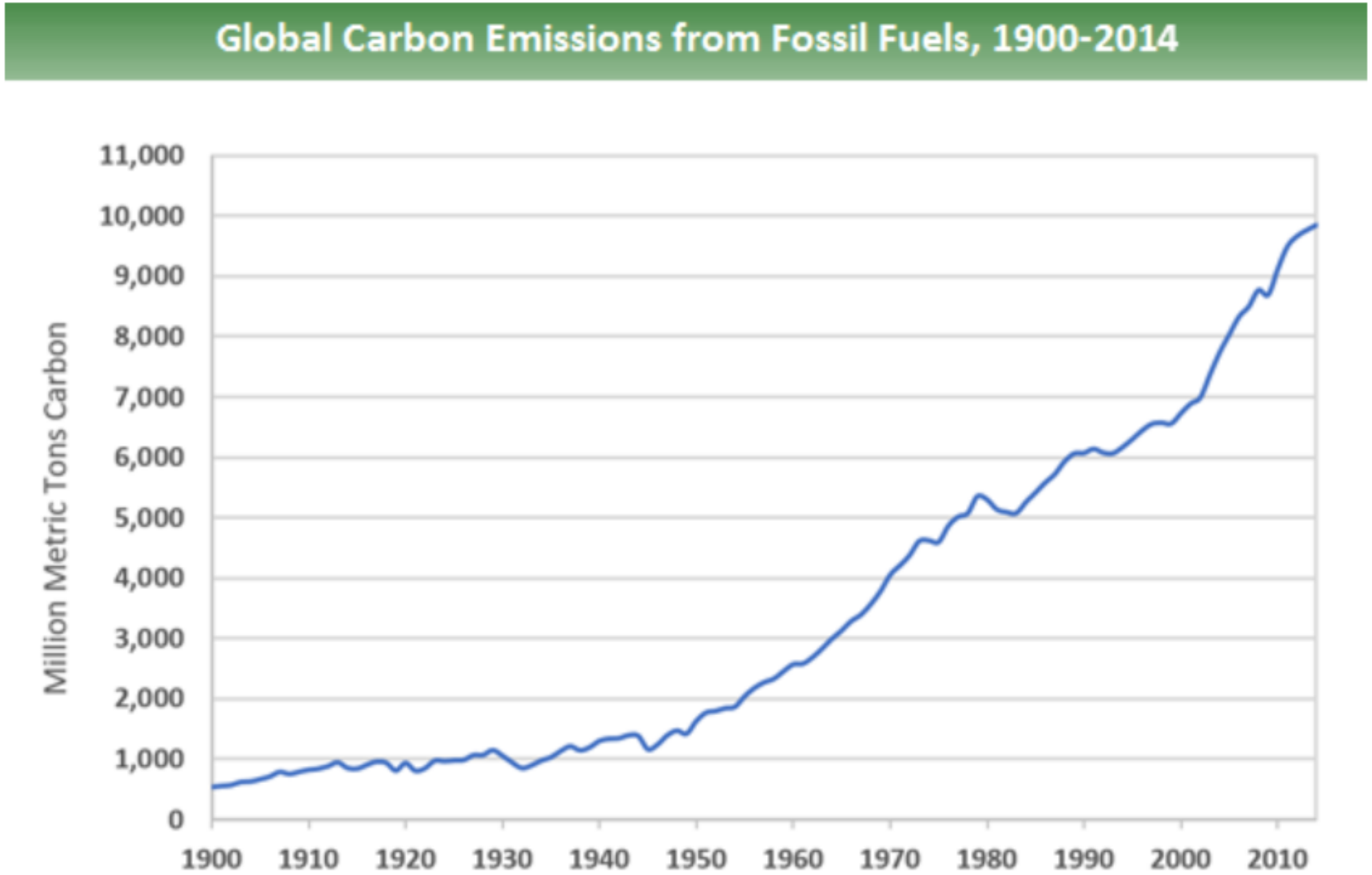


This graphic from NCAR was part of the SCIENCE Section in the 28 April 1975 edition of NEWSWEEK. …article's headline was , "**The Cooling World.**"

https://casf.me/wp-content/uploads/2019/01/PDF_Climate-Impact-of-Increasing-Atmospheric-Carbon-Dioxide_Science__28_August_1981_Hansen81_CO2_Impact.pdf



https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data?mc_cid=2c4080c62f&mc_eid=6d17b006b3



TOP:
CO2 Emissions, data from the EPA and Oak Ridge National Lab

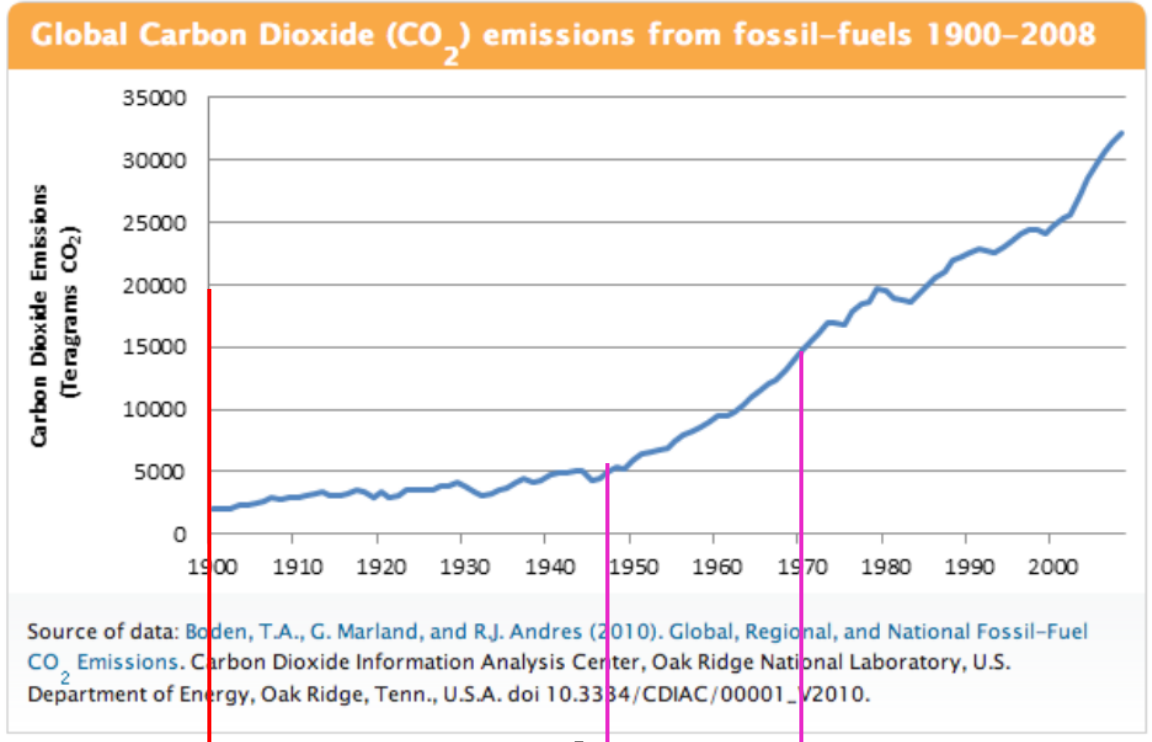
BOTTOM:
NH Temperature from Hansen and NASA, 1981.

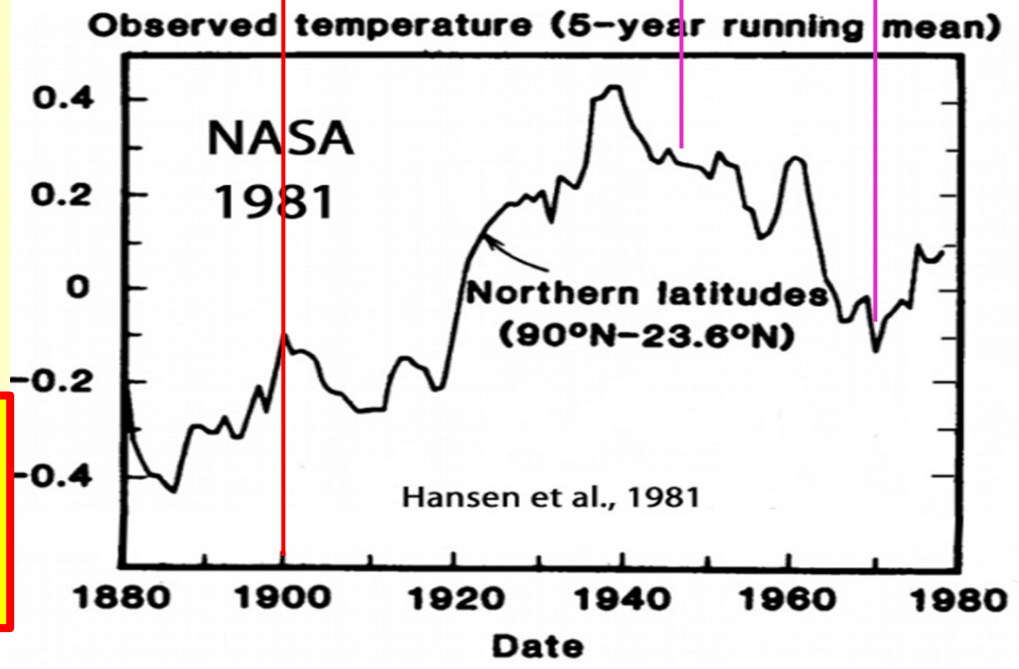
Red line shows date axis alignment at 1900 AD.

~1946, CO2 emissions were about 5 Gigatons.
By about 1970, that had about **tripled** to 15 Gigatons of CO2 emissions.

Yet, ~1940-1970, temperatures plummeted according to Fig 3 of Hansen's "Climate Impact of Increasing Atmospheric Carbon Dioxide"

Data show emissions tripled yet temperatures plummeted, which led to **"The New Ice Age is Coming!"** stories of the 1970s





New York Times, 21 May 1975

Scientists Ask Why World Climate Is Changing; Major Cooling May Be Ahead; Scientists Ponder Why World's Climate Is Changing; a Major Cooling Widely Considered to Be Inevitable

By WALTER SULLIVAN ();
May 21, 1975,
, Section , Page 45, Column , words

[DISPLAYING ABSTRACT]

The world's climate is changing. Of that scientists are firmly convinced. But in what direction and why are subjects of deepening debate.

SCIENCE

The Cooling World

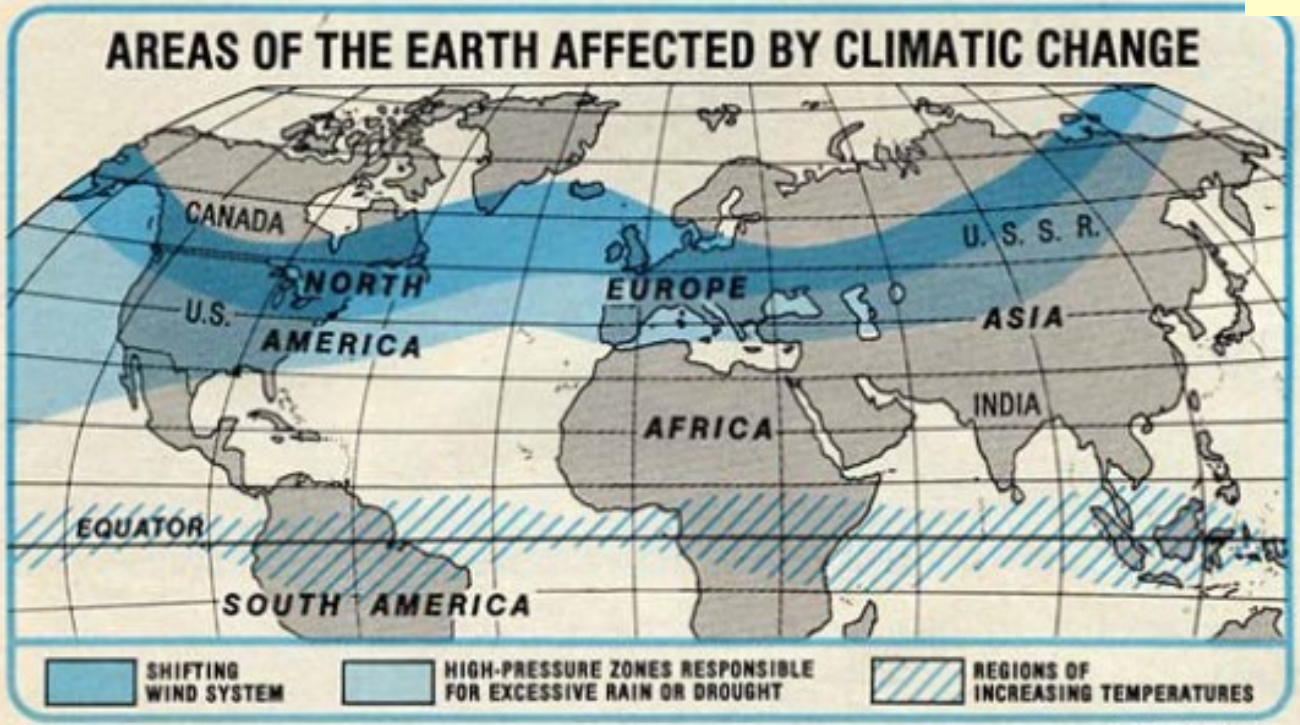
There are ominous signs that the earth's weather patterns have begun to change dramatically and that these changes may portend a drastic decline in food production—with serious political implications for just about every nation on earth. The drop in food output could begin quite soon, perhaps only ten years from now. The regions destined to feel its impact are the great wheat-producing lands of Canada and the U.S.S.R. in the north, along with a number of marginally self-sufficient tropical areas—parts of India, Pakistan, Bangladesh, Indochina and Indonesia—where the growing season is dependent upon the rains brought reduce agricultural productivity for the rest of the century. If the climatic change is as profound as some of the pessimists fear, the resulting famines could be catastrophic. "A major climatic change would force economic and social adjustments on a worldwide scale," warns a recent report by the National Academy of Sciences, "because the global patterns of food production and population that have evolved are implicitly dependent on the climate of the present century."

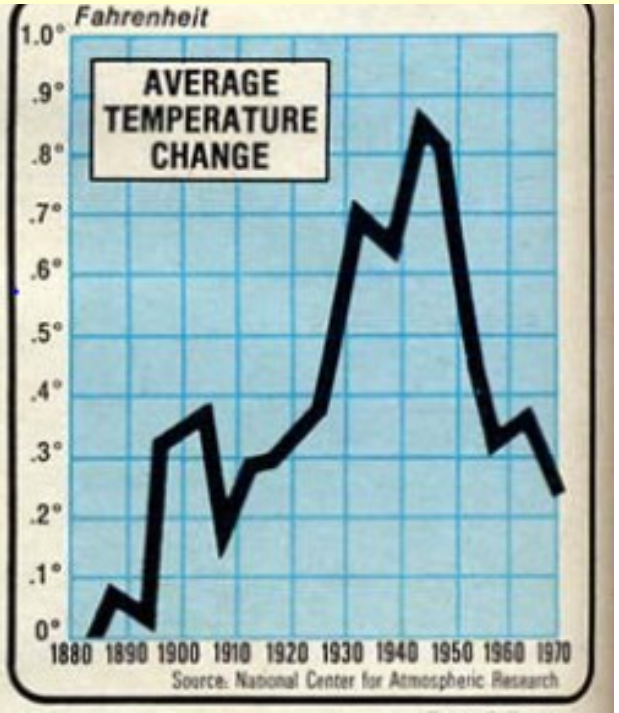
A survey completed last year by Dr. Murray Mitchell of the National Oceanic and Atmospheric Administration reveals a drop of half a degree in average ground temperatures in the Northern Hemisphere between 1945 and 1968. Accord-

Newsweek, 28 April 1975

Drop in food production… wheat-producing areas of Canada and USSR…"

"A drop of half a degree in average ground Temperatures In Northern Hemisphere between 1945 and 1968."

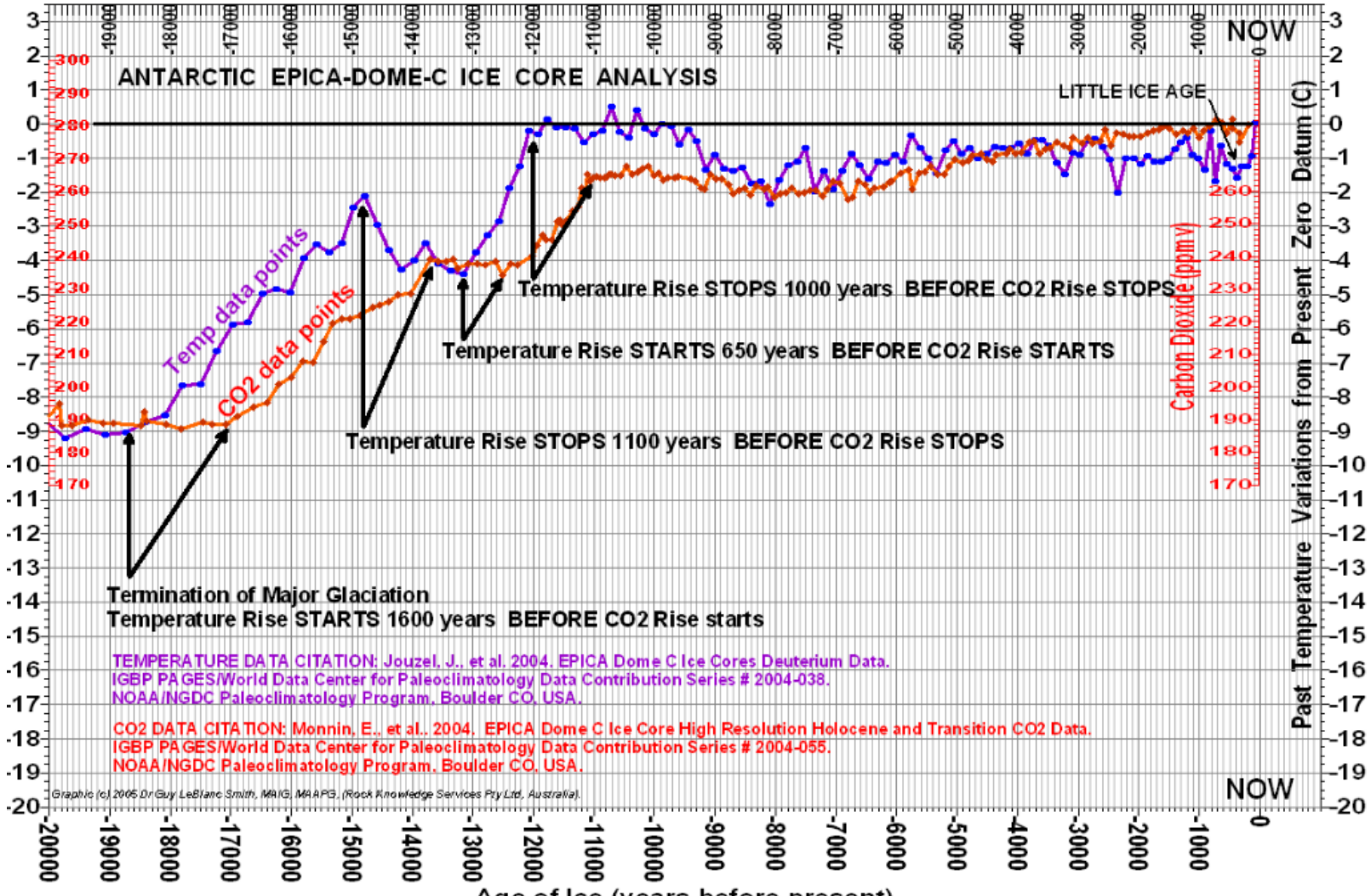




Question: What about the graphs, data, which show that **Temperature controls <CO2>? Graph Below.**
https://casf.me/wp-content/uploads/2017/10/PDF_-Climate-Short_Henry_s-Law-from-175-years-ago_Temperature-Controls-CO2_15-Sep_2017.pdf
If CO2 controlled Temp, this would be the Hottest interglacial, but it is the Coldest in last 450,000 years, next slide.

http://carbon-sense.com/category/the-evidence/

Henry's Law explains the correlation between Temperature and CO2



Holocene, **Coldest** of the five interglacials.

0 = Current Temp

Blue = Temperature

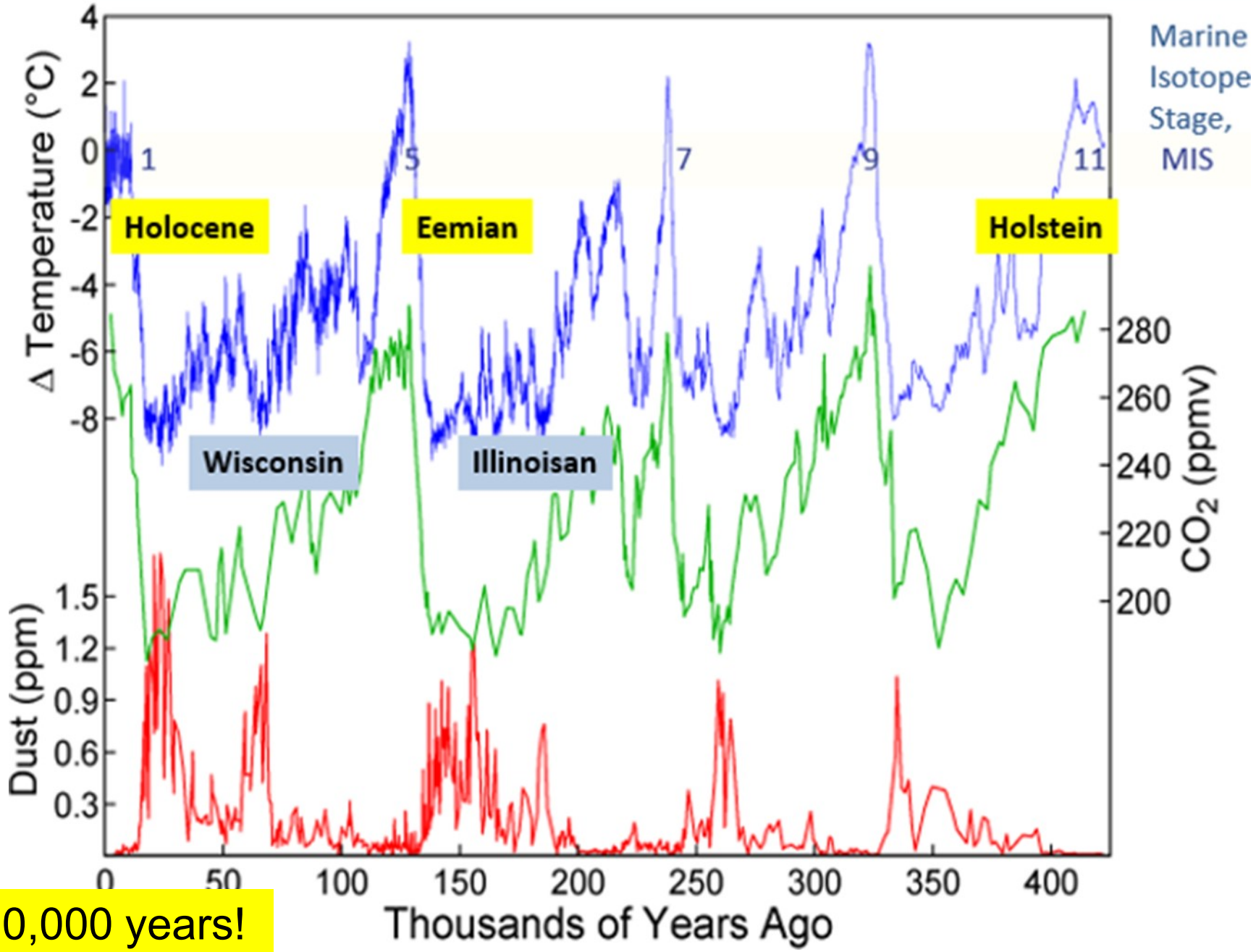
Green = <CO2>

Red = <Dust>

In August 2025, <CO2> is 425 PPM.

Off Scale High on this chart.
Yet this remains the COLDEST of the five interglacials in the past 410,000 years!

http://en.wikipedia.org/wiki/File:Vostok-ice-core-petit.png



Let's review the data shown here:

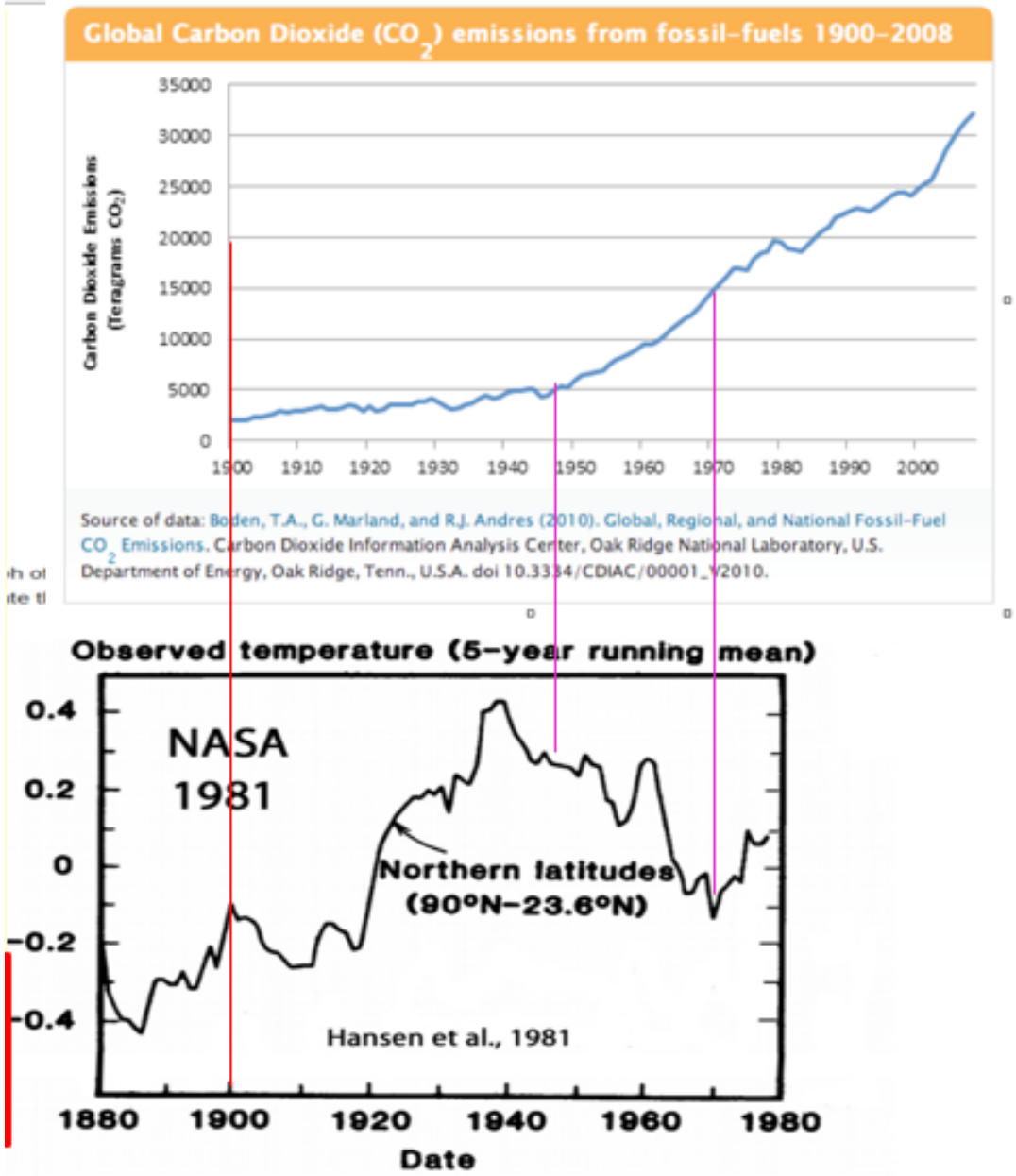
The data show that from the 1940s to the 1970s emissions TRIPLED, yet temperatures fell dramatically.

We will see later….

The DOE report by the five academics, Christy, Curry, Koonin, McKitrick and Spencer, unequivocally state that CO2 emissions cause warming.

I can not reconcile this/these, at least not yet.

Possible discussion topic at the end.



END SIDEBAR

Sidebar 2

CO_2 History, Food production worries,
Low CO_2 Worries/climate cooling worries.

https://nhm.org/site/sites/default/files/rancho_la_brea/pdf/ward,%20harris%20publication%20PNAS.pdf 18 Jan 2005

PNAS

Carbon starvation in glacial trees recovered from the La Brea tar pits, southern California

Joy K. Ward*†‡, John M. Harris§, Thure E. Cerling†¶, Alex Wiedenhoeft‖, Michael J. Lott†, Marla-Denise Dearing†, Joan B. Coltrain**, and James R. Ehleringer†

*Department of Ecology and Evolutionary Biology, University of Kansas, 1200 Sunnyside Avenue, Lawrence, KS 66045; †Department of Biology, University of Utah, 257 South 1400 East, Salt Lake City, UT 84112-0840; §The George C. Page Museum of La Brea Discoveries, 5801 Wilshire Boulevard, Los Angeles, CA 90036; ¶Department of Geology and Geophysics, University of Utah, 135 South 1460 East, Salt Lake City, UT 84112; ‖Forest Products Laboratory, U.S. Department of Agriculture Forest Service, One Gifford Pinchot Drive, Madison, WI 53726-2398; and **Department of Anthropology, University of Utah, 270 South 1400 East, Salt Lake City, UT 84112

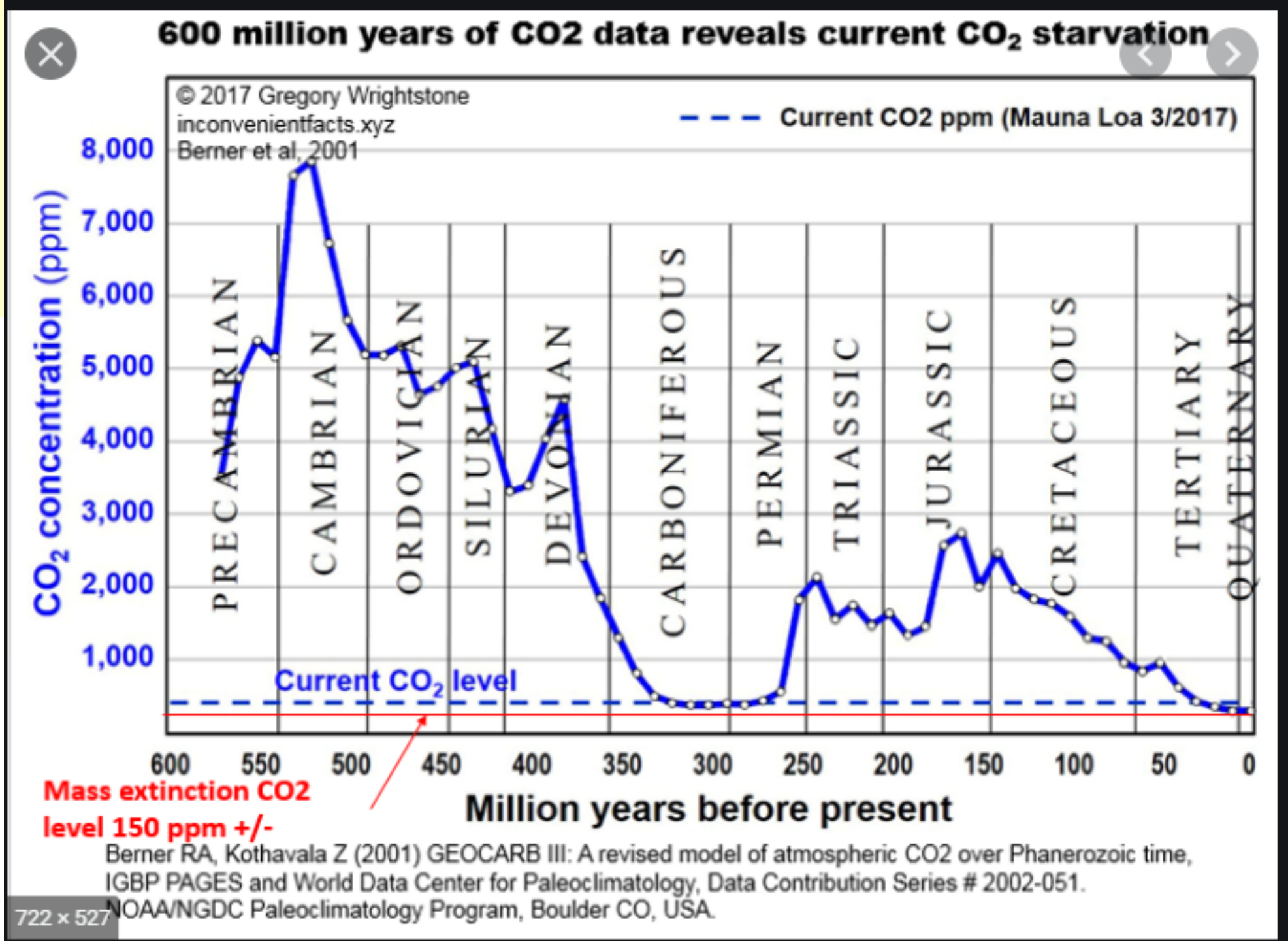
… Rancho La Brea tar pit fossil collection includes *Juniperus (C3)* wood specimens that 14C date between 7.7 and 55 thousand years(kyr) B.P., providing a constrained record of plant response for southern California during the last glacial period…

… Atmospheric CO2 concentration ([CO2]) ranged between 180 and 220 PPM during glacial periods, rose to 280 PPM before the industrial period, and is currently approaching 380 PPM in the modern atmosphere…

… glacial trees… indicate.. that glacial trees were undergoing carbon starvation.

paragraphing, usage, emphasis, added

https://notrickszone.com/2020/12/05/in-geological-terms-todays-atmospheric-co2-concentrations-are-still-uncomfortably-low/



The New York Times

THURSDAY, AUGUST 8, 1974

Climate Changes Endanger World's Food Output

By HAROLD M. SCHMECK Jr.

Bad weather this summer and the threat of more of it to come hang ominously over every estimate of the world food situation.

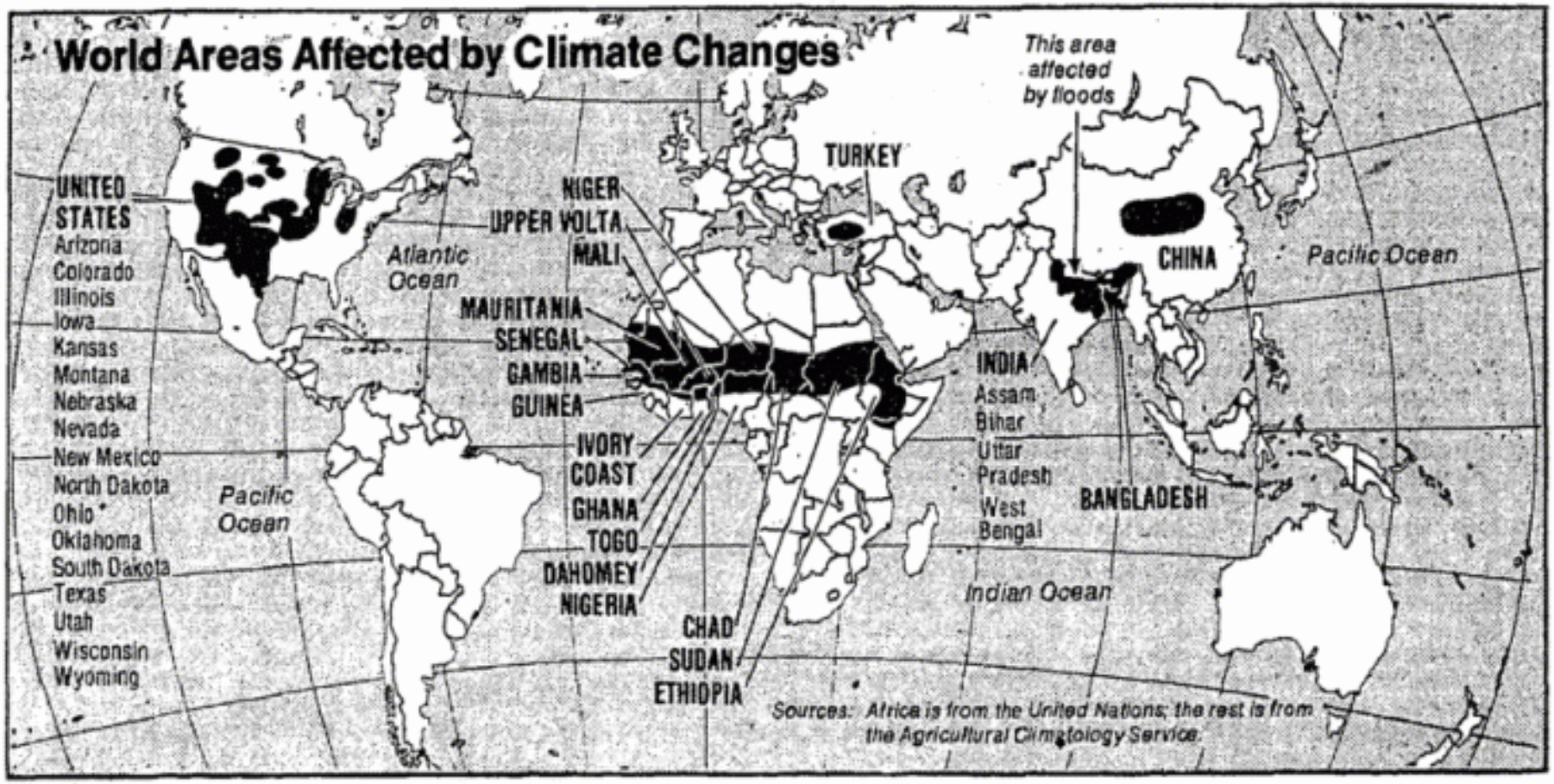
It is a threat the world may have to face more often in the years ahead. Many weather scientists expect greater variability in the earth's weather and, consequently, greater risk of local disasters in places where conditions of recent years have become accepted as the norm.

Some experts believe that mankind is on the threshold

This is another in a series of articles, which will appear from time to time, examining the world food situation.

of a new pattern of adverse global climate for which it is ill-prepared.

A recent meeting of climate experts in Bonn, West Germany, produced the unanimous conclusion that the change in global weather pat-



The New York Times/Aug. 8, 1974

Severe weather changes, ranging from floods to drought, have struck many of the world's major agricultural areas so far this year. Climate experts say that even greater variability of weather can be expected in years to come, bringing changes to arable areas that have adjusted to past patterns, thus threatening future output.

End Sidebar 2 on Low CO_2 Worries.

There are numerous data sets that show that the human condition is improving,

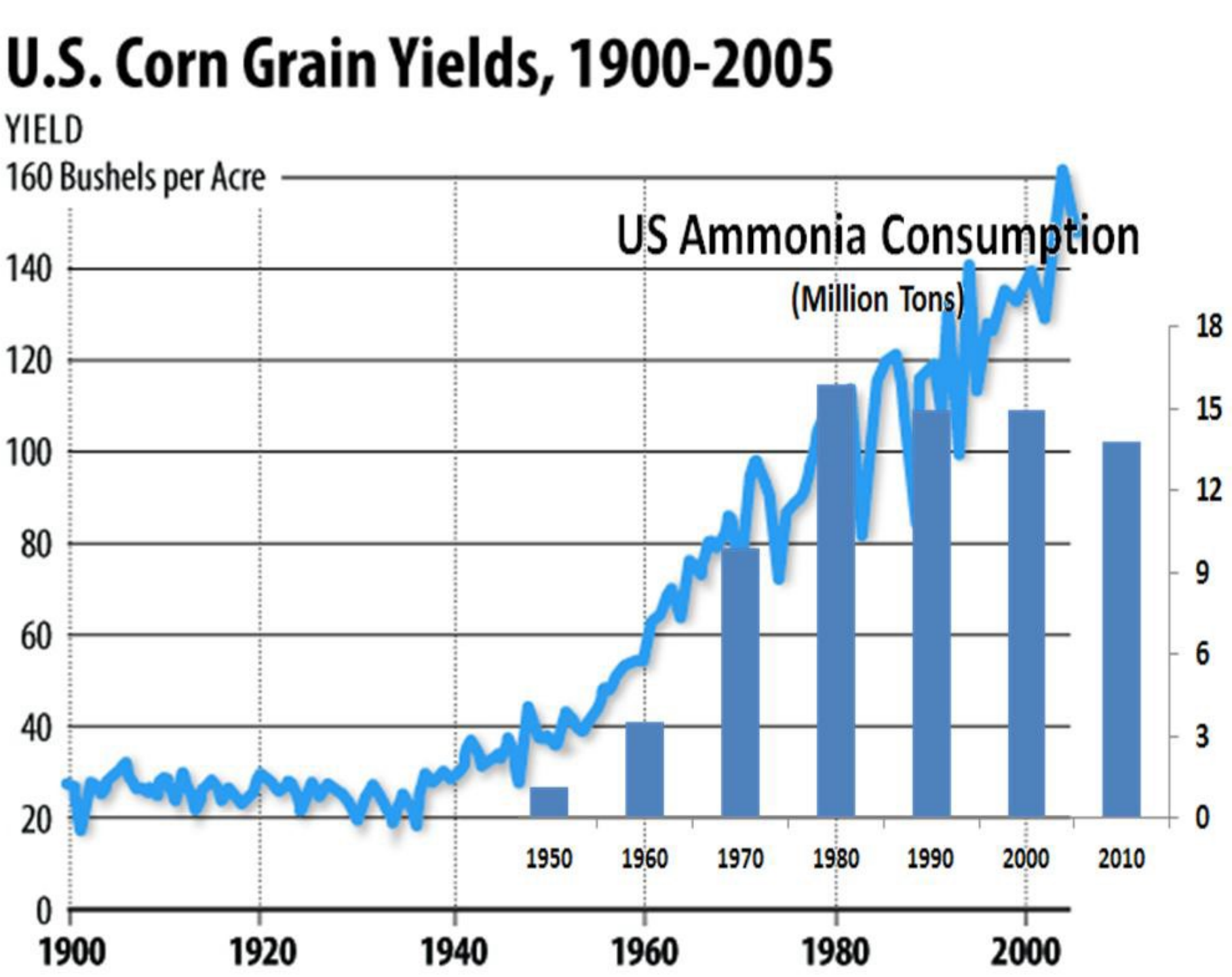
not approaching catastrophe.

Ammonia consumption goes to the Haber Process which turns natural gas into Ammonium Nitrate fertilizer.

From Wikipedia:

"The Haber process now produces 450 million tons of nitrogen fertilizer per year, mostly in the form of anhydrous ammonia, ammonium nitrate, and urea. Three to five percent of the world's natural gas production is consumed in the Haber process (around 1–2% of the world's energy supply)…

In combination with pesticides, these fertilizers have quadrupled the productivity of agricultural land."



http://crops.missouri.edu/audit/images/CornYields_MO.jpg

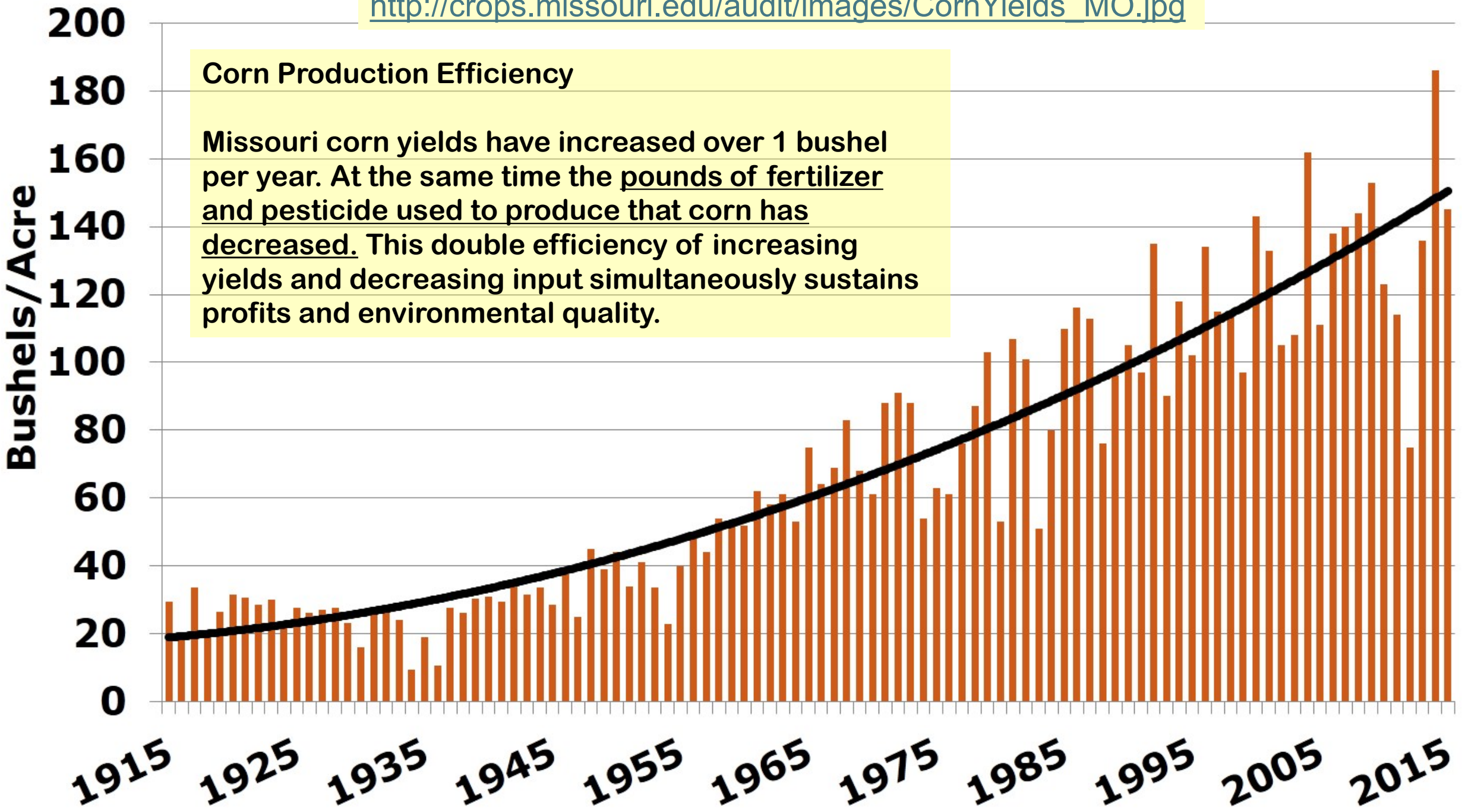
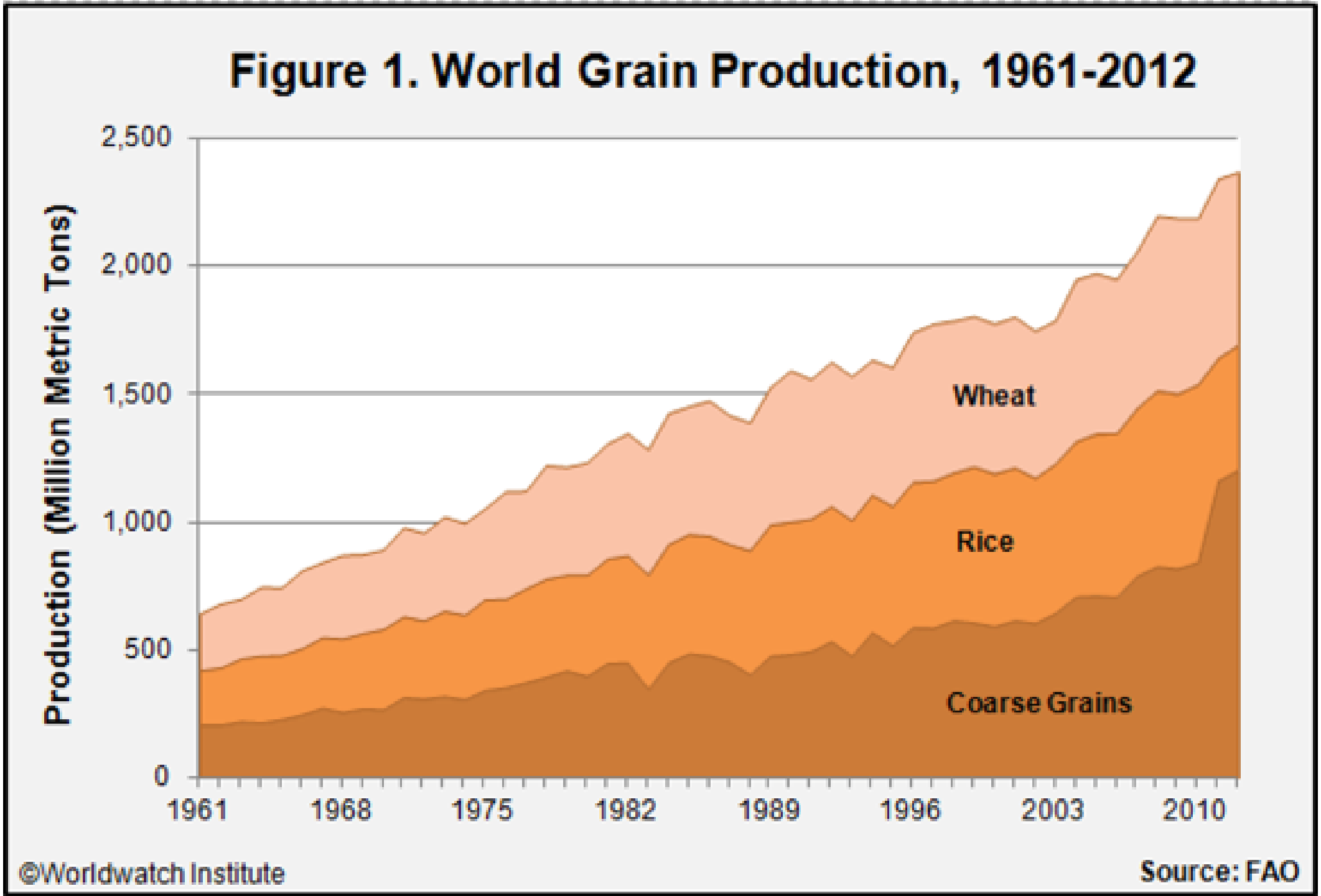


Figure 1. World Grain Production, 1961-2012



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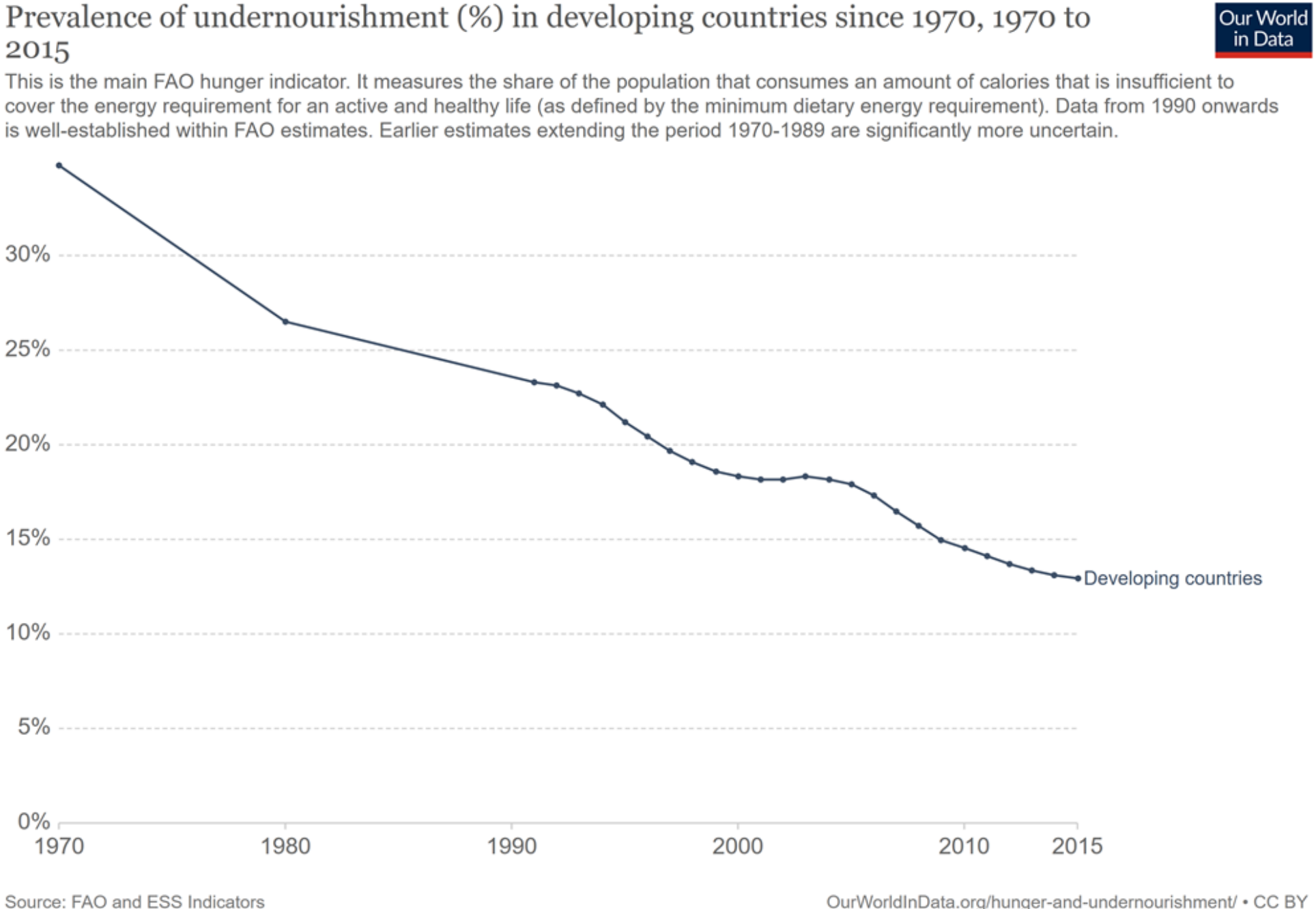

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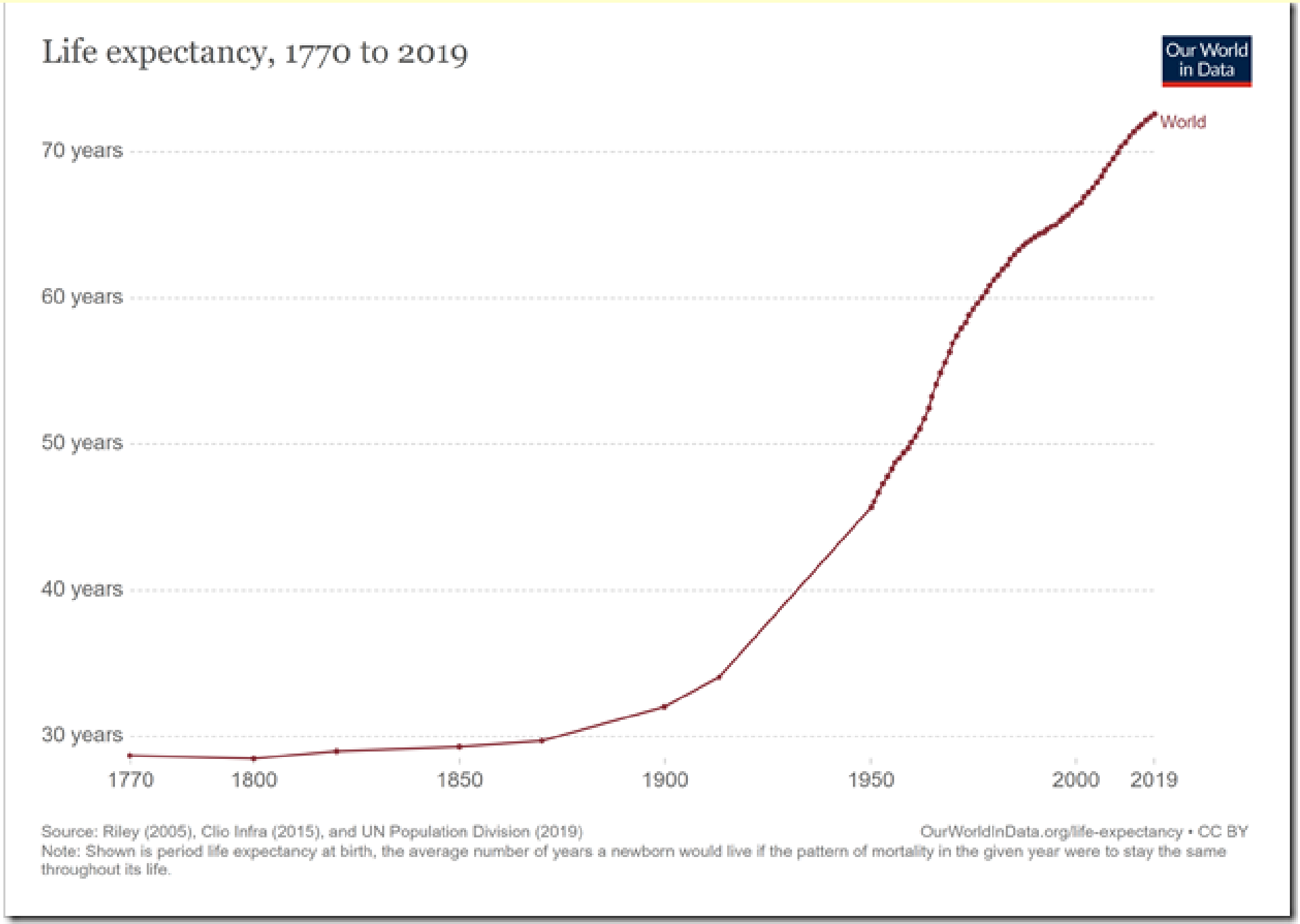
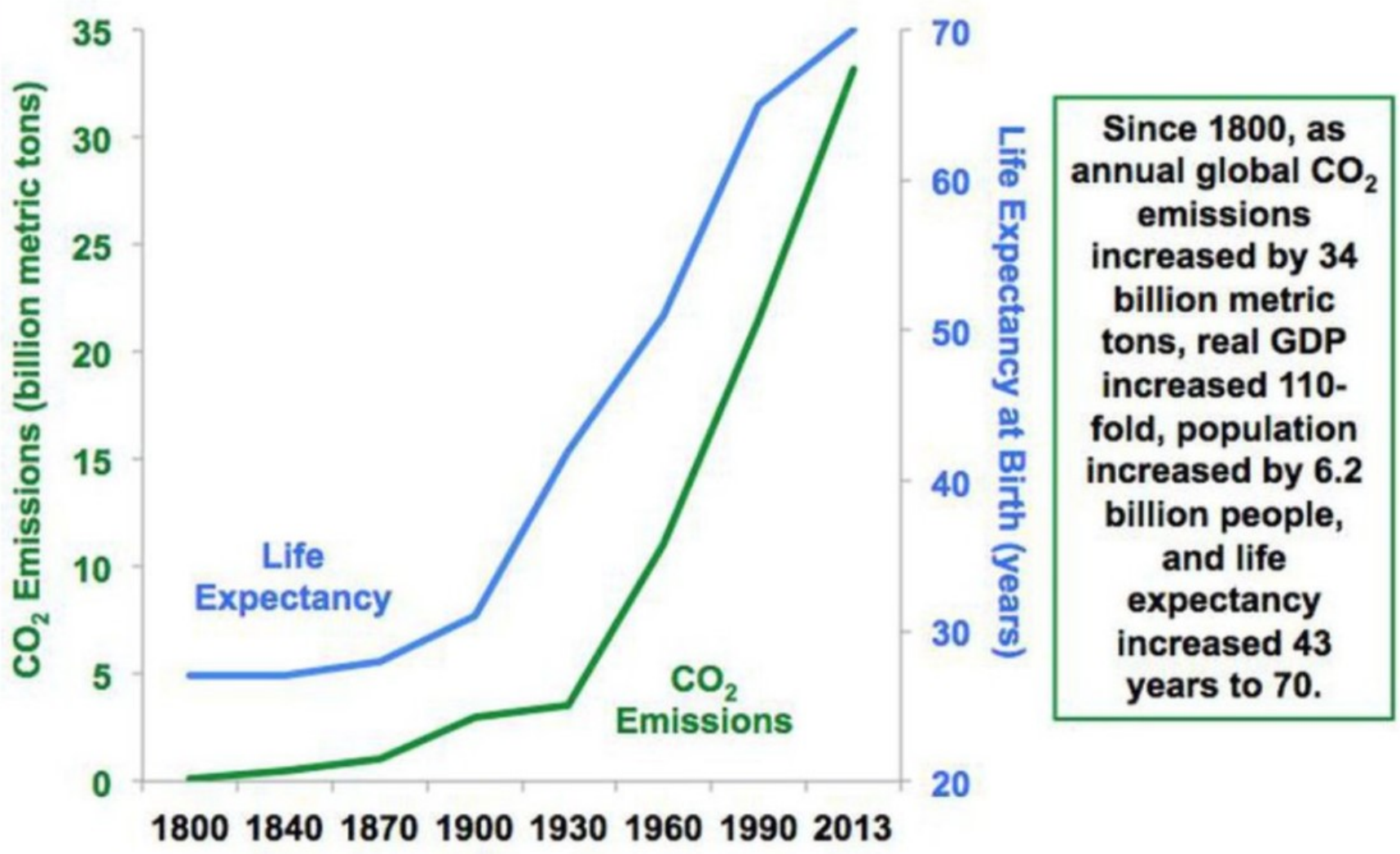


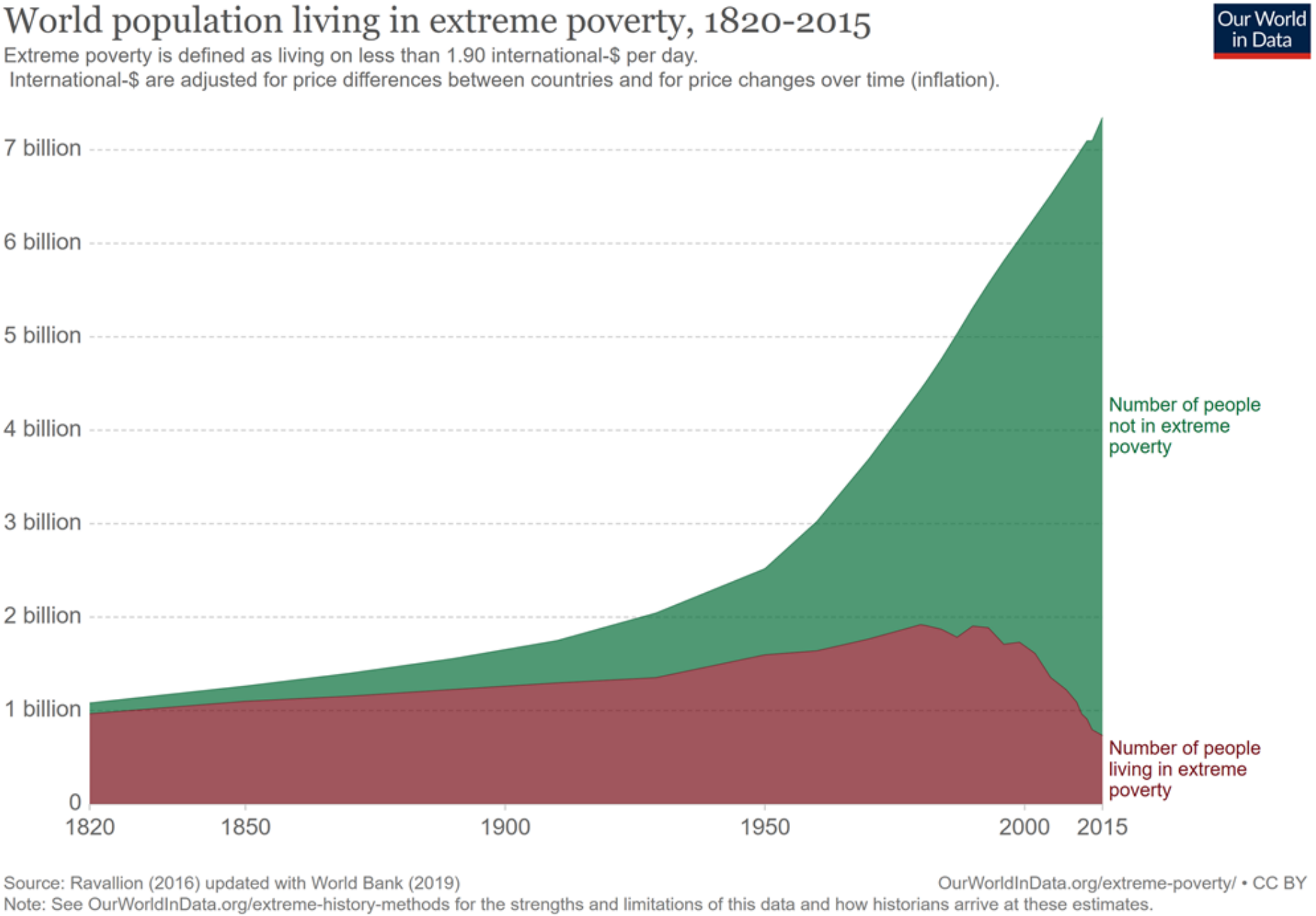
https://notrickszone.com/2020/12/06/former-wmo-official-co2-insignificant-for-balance-of-energy-completely-unnecessary-to-reduce-co2/

Life Expectancy Has Soared in the "CO2-Era"

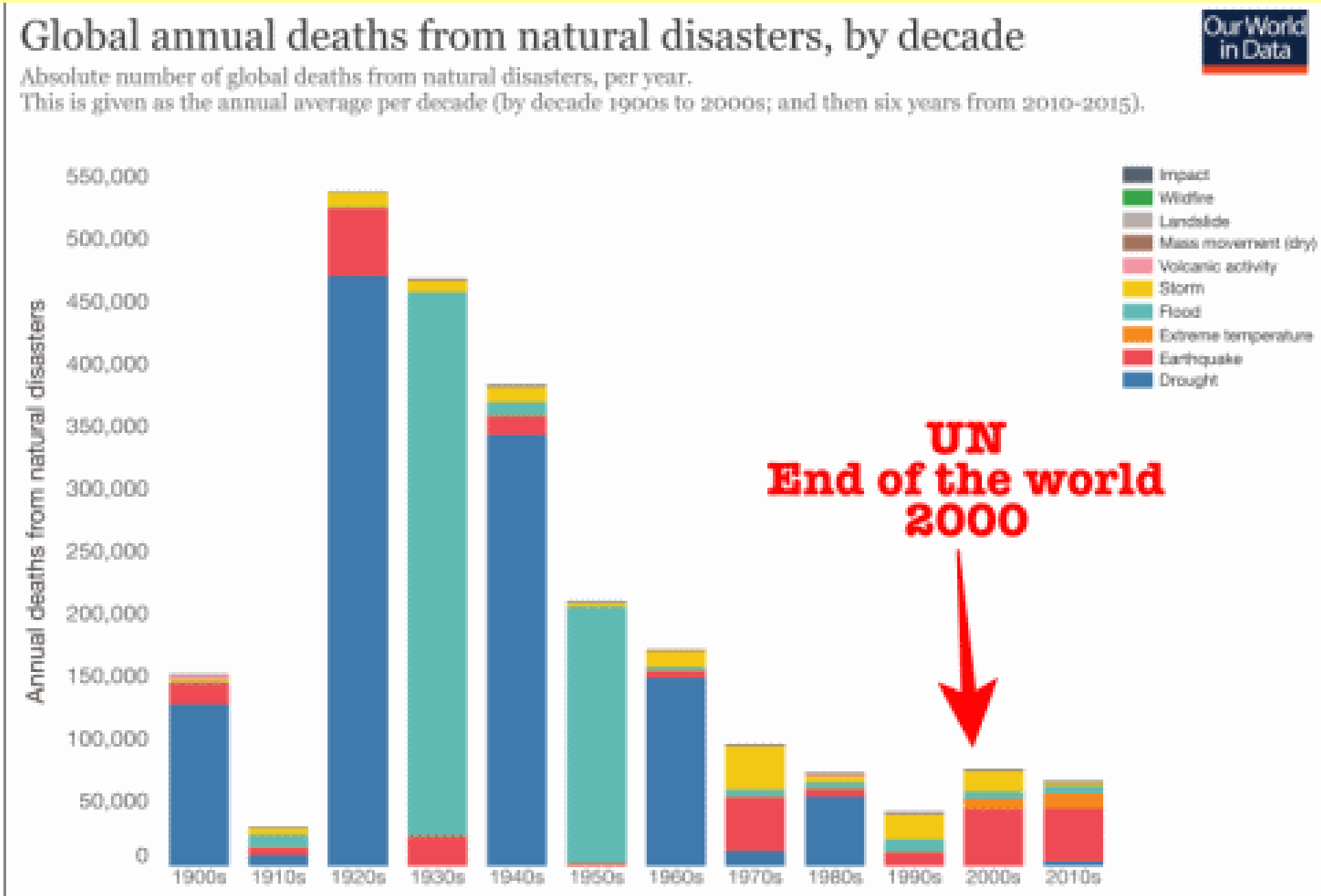


Sources: Earth Policy Institute; IEA; WHO

https://notalotofpeopleknowthat.wordpress.com/2021/03/29/richard-betts-gloomy-milestone



https://realclimatescience.com/2019/05/current-apocalypse-forecast/ **Use slide show for blink mode**



https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate

https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate

Report to U.S. Energy Secretary Christopher Wright

July 23, 2025

Climate Working Group:

John Christy, Ph.D.

Judith Curry, Ph.D.

Steven Koonin, Ph.D.

Ross McKitrick, Ph.D.

Roy Spencer, Ph.D.

The following sections were copy-pasted from the original, link below.

Spacing and paragraphing were done to fit the geometry of Power Point's format.

Underlining and **Bolding** are my edits for emphasis.

https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

SECRETARY'S FOREWORD

Energy, Integrity, and the Power of Human Potential

Over my lifetime, I've had the privilege of working as an energy entrepreneur across a range of fields—nuclear, geothermal, natural gas, and more—and I now serve as Secretary of Energy under President Donald Trump. But above all, **I'm a physical scientist who sees modern energy as nothing short of miraculous.** It powers every aspect of modern life, drives every industry, and has made America an energy powerhouse with the ability to fuel global progress.

The rise of human flourishing over the past two centuries is a story worth celebrating. Yet we are told—relentlessly—that the very energy systems that enabled this progress now pose an existential threat. Hydrocarbon-based fuels, the argument goes, must be rapidly abandoned or else we risk planetary ruin.

That view demands scrutiny. That's why I commissioned this report: to encourage a more thoughtful and science-based conversation about climate change and energy. With my technical background, I've reviewed reports from the Intergovernmental Panel on Climate Change, the U.S. government's assessments, and the academic literature. I've also engaged with many climate scientists, including the authors of this report.

What I've found is that media coverage often distorts the science. Many people walk away with a view of climate change that is exaggerated or incomplete. To provide clarity and balance, I asked a diverse team of independent experts to critically review the current state of climate science, with a focus on how it relates to the United States.

I didn't select these authors because we always agree—far from it. In fact, they may not always agree with each other. But I chose them for their rigor, honesty, and willingness to elevate the debate. I exerted no control over their conclusions. What you'll read are their words, drawn from the best available data and scientific assessments.

I've reviewed the report carefully, and I believe it faithfully represents the state of climate science today. Still, many readers may be surprised by its conclusions—which differ in important ways from the mainstream narrative. That's a sign of how far the public conversation has drifted from the science itself. To correct course, we need open, respectful, and informed debate. That's why I'm inviting public comment on this report. Honest scrutiny and scientific transparency should be at the heart of our policymaking.

Climate change is real, and it deserves attention. But it is not the greatest threat facing humanity. That distinction belongs to global energy poverty. As someone who values data, I know that improving the human condition depends on expanding access to reliable, affordable energy. **Climate change is a challenge—not a catastrophe**. But misguided policies based on fear rather than facts could truly endanger human well-being.

We stand at the threshold of a new era of energy leadership. If we empower innovation rather than restrain it, America can lead the world in providing cleaner, more abundant energy—lifting billions out of poverty, strengthening our economy, and improving our environment along the way.

https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate

Report to U.S. Energy Secretary Christopher Wright

July 23, 2025

I put this slide in again as a spacer to show that the next comes from these scientists.

Climate Working Group:

John Christy, Ph.D.

Judith Curry, Ph.D.

Steven Koonin, Ph.D.

Ross McKitrick, Ph.D.

Roy Spencer, Ph.D.

EXECUTIVE SUMMARY

This report reviews scientific certainties and uncertainties in how anthropogenic carbon dioxide (CO2) and other greenhouse gas emissions have affected, or will affect, the Nation's climate, extreme weather events, and selected metrics of societal well-being. Those emissions are increasing the concentration of CO2 in the atmosphere through a complex and variable carbon cycle, where some portion of the additional CO2 persists in the atmosphere for centuries.

Elevated concentrations of CO2 directly enhance plant growth, globally contributing to "greening" the planet and increasing agricultural productivity [Section 2.1, Chapter 9]. They also make the oceans less alkaline (lower the pH). That is possibly detrimental to coral reefs, although the recent rebound of the Great Barrier Reef suggests otherwise [Section 2.2].

Carbon dioxide also acts as a greenhouse gas, exerting a warming influence on climate and weather [Section 3.1]. Climate change projections require scenarios of future emissions. There is evidence that scenarios widely-used in the impacts literature have overstated observed and likely future emission trends [Section 3.1].

The world's several dozen global climate models offer little guidance on how much the climate responds to elevated CO2, with the average surface warming under a doubling of the CO2 concentration ranging from 1.8°C to 5.7°C [Section 4.2]. Data-driven methods yield a lower and narrower range [Section4.3]. Global climate models generally run "hot" in their description of the climate of the past few decades– too much warming at the surface and too much amplification of warming in the lower- and mid-troposphere [Sections 5.2-5.4]. The combination of overly sensitive models and implausible extreme scenarios for future emissions yields exaggerated projections of future warming.

Most extreme weather events in the U.S. do not show long-term trends. Claims of increased frequency or intensity of hurricanes, tornadoes, floods, and droughts are not supported by U.S. historical data [Sections 6.1-6.7].

Additionally, forest management practices are often overlooked in assessing changes in wildfire activity [Section 6.8]. Attribution of climate change or extreme weather events to human CO2 emissions is challenged by natural climate variability, data limitations, and inherent model deficiencies [Chapter 8].

Moreover, solar activity's contribution to the late 20th century warming might be underestimated [Section 8.3.1].

Global sea level has risen approximately 8 inches since 1900, but there are significant regional variations driven primarily by local land subsidence; U.S. tide gauge measurements in aggregate show no obvious acceleration in sea level rise beyond the historical average rate [Chapter 7].

Both models and experience suggest that CO2-induced warming might be less damaging economically than commonly believed, and excessively aggressive mitigation policies could prove more detrimental than beneficial [Chapters 9, 10, Section 11.1].

Social Cost of Carbon estimates, which attempt to quantify the economic damage of CO2 emissions, are highly sensitive to their underlying assumptions and so provide limited independent information [Section 11.2].

U.S. policy actions are expected to have undetectably small direct impacts on the global climate and any effects will emerge only with long delays [Chapter 12].

PREFACE

This document originated in late March 2025 when Secretary Wright assembled an independent group to write a report on issues in climate science relevant for energy policymaking, including evidence and perspectives that challenge the mainstream consensus. We agreed to undertake the work on the condition that there would be no editorial oversight by the Secretary, the Department of Energy, or any other government personnel. This condition has been honored throughout the process and the writing team has worked with full independence.

The group began working in early April with a May 28 deadline to deliver a draft for internal DOE review. The short timeline and the technical nature of the material meant that we could not comprehensively review all topics. Rather, we chose to focus on topics that are treated by a serious, established academic literature; that are relevant to our charge; that are downplayed in, or absent from, recent assessment reports; and that are within our competence.

While the report is intended to be accessible to non-experts, we have omitted some introductory or explanatory material that can easily be accessed elsewhere. Nor have we attempted to survey the entire literature related to the topics covered. We have focused as much as possible on literature published since 2020 and referenced previous IPCC and NCA assessment reports. We have also used data through 2024 where possible.

The writing team is grateful to Secretary Wright for the opportunity to prepare this report and for his support of independent scientific assessment and open scientific debate. We are also grateful to a team of anonymous DOE and national lab reviewers whose input helped improve the final report.

John Christy, Ph.D.
Judith Curry, Ph.D.
Steven Koonin, Ph.D.
Ross McKitrick, Ph.D.
Roy Spencer, Ph.D.

Comments

This 141-page report is densely-packed with facts… observations, conclusions, based on those facts.

There are 12 Chapters, each containing a summary, discussion, and numerous references for that chapter from, the literature.

I have perused most of the report. The authors make it clear when they disagree with other bodies, such as the IPCC,

Detailed examination would take me many more days, so I highlight here only selected excerpts.

Detailed understanding of this report is a worthwhile goal.

I agree with most of what these authors present in the report.

One puzzlement for me is the increase in emissions from the 1940s to the 1970s, when temperatures plummeted; this was not addressed in the appropriate sections of chapters 3 and 4 when I looked. Another, present <CO2> is 425 PPM, yet this remains the coldest interglacial in the last 410,000 years. (Mentioned in the previous sidebar)

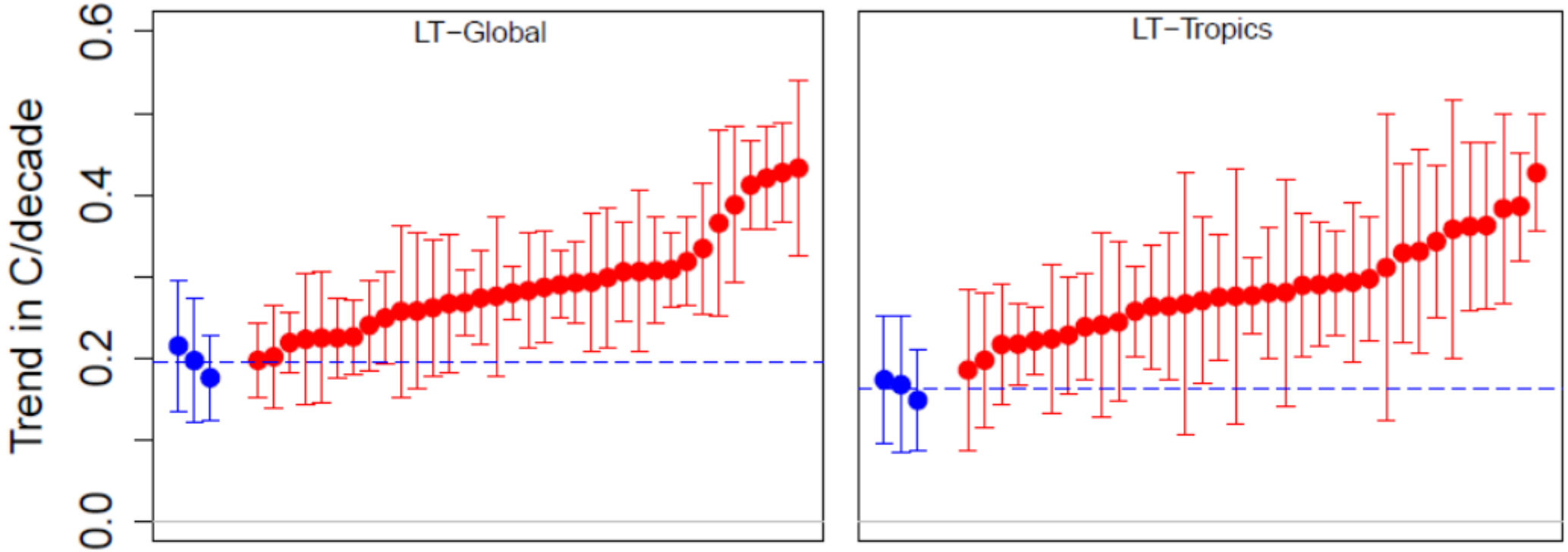


Figure 5.4: Observed versus CMIP6 modeled warming trends (°C/decade 1979-2024) in the global and tropical lower (LT) and mid-troposphere (MT) using the methodology of McKitrick and Christy (2020) on data updated from 2014 to 2024. Blue dots: warming trends with 95 percent confidence intervals for 3 data products (radiosondes, reanalysis, and satellites). Blue dashed line: warming trend average for 3 observed series. Red dots: modeled warming trends with 95 percent confidence intervals in 35 models arranged lowest to highest.

From Pg 35 of the report, Fig 5.4. (Excerpt) The blue dots show the warming from Radiosondes, Reanalysis, and Satellites. Red dots are warming from different models in the Sixth Coupled Model Intercomparison Project (CMIP6). From Pg 36, this report says, ***"Notably, despite the accumulation of evidence of excess model warming, the IPCC assigns only medium confidence to the existence of a warming bias."*** <Bold, italics, added>

https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

Nile Minimum Depth near Cairo 622-1284 AD.

Look carefully at the basic data and the 30-year average. There are wild annual, decadal and century scale variations in the natural climate.

"The data, measured in meters, shows a characteristic pattern of year-to-year fluctuations around longer-term trends."

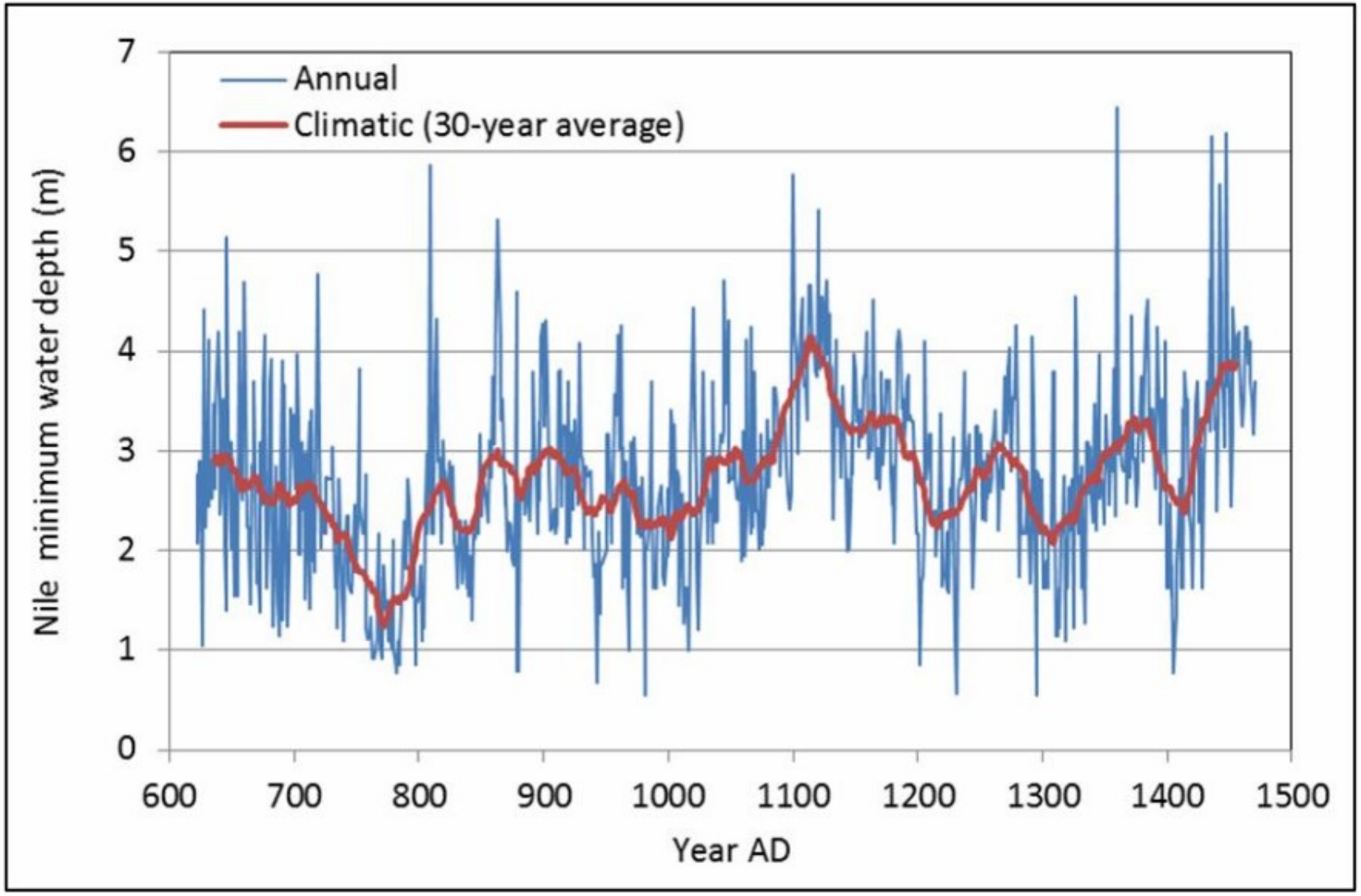


Figure 6.1.1: The annual minimum depth of the Nile River near Cairo over more than 65 years from 622 to 1284 A.D. The data, measured in meters, shows a characteristic patte of year-to-year fluctuations around longer-term trends. Data from Koutsoyiannis (2013)

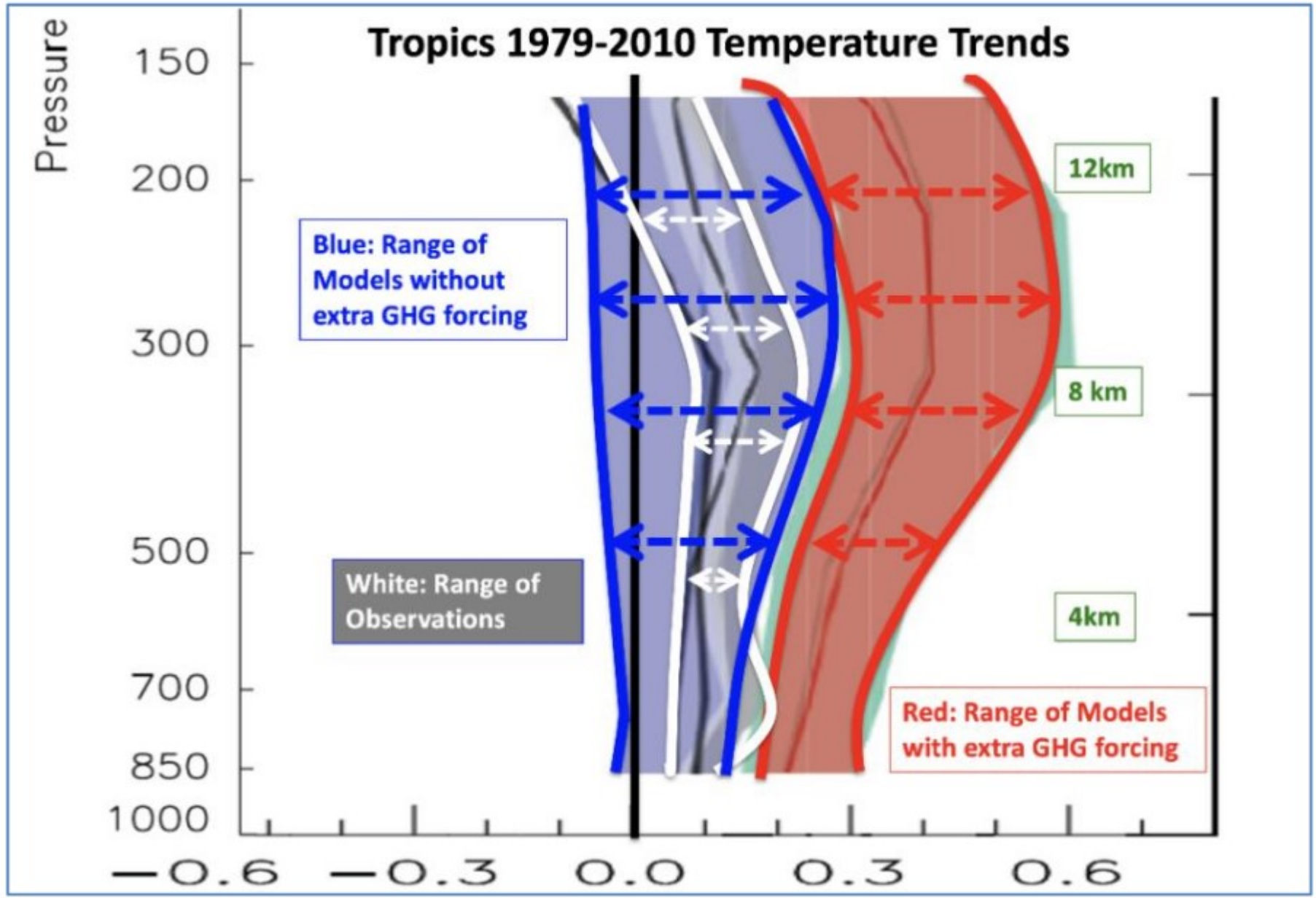


Figure 5.5: Vertical warming pattern for tropics (20S to 20N). Horizontal axis: °C/decade. Source: Annotated version of IPCC AR5 Figure 10.SM.1

"Figure 5.5 compares model and observational temperature trends by altitude between 20S and 20N (the tropics). In this region where the models say the warming should be strongest, the observations (shown here in white) lie within the blue "No CO2" band and entirely outside the "with CO2" red envelope.

This means that in the entire tropical atmospheric column from the surface to the base of the stratosphere, observed warming trends are so small as to be consistent with the output of models that have no anthropogenic CO2, and inconsistent with the entire envelope of warming trends generated by models forced with increased CO2."

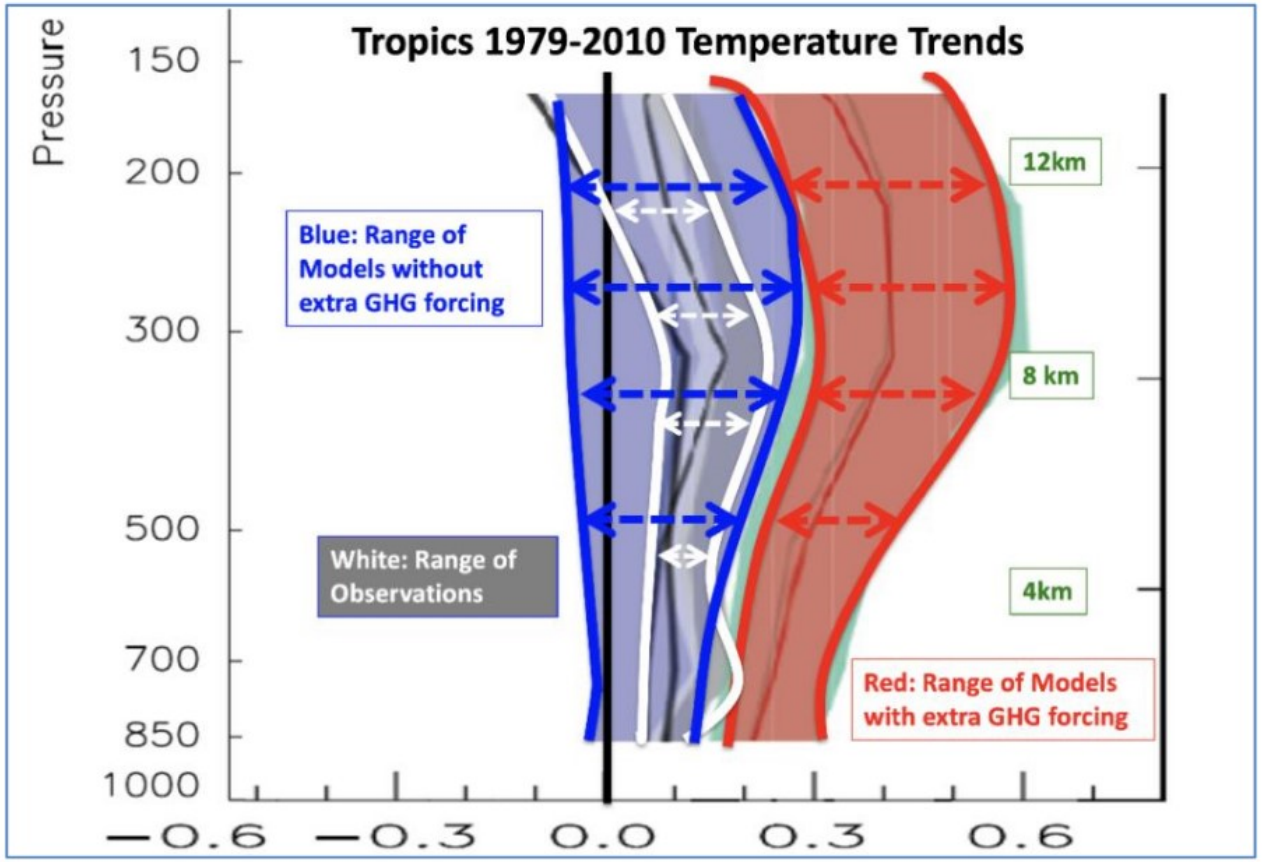


Figure 5.5: Vertical warming pattern for tropics (20S to 20N). Horizontal axis: °C/decade. Source: Annotated version of IPCC AR5 Figure 10.SM.1

We saw another version of this graphic earlier in the presentation.

"…The atmosphere's temperature profile is a case where models are not merely uncertain but also show a common warming bias relative to observations. <u>This suggests that they misrepresent certain fundamental feedback processes."</u>

"…The IPCC AR6 did not assess this issue." <Underlining, Bold Added>

Modeled versus observed warming trends in the U.S. Corn Belt, 1973-2022

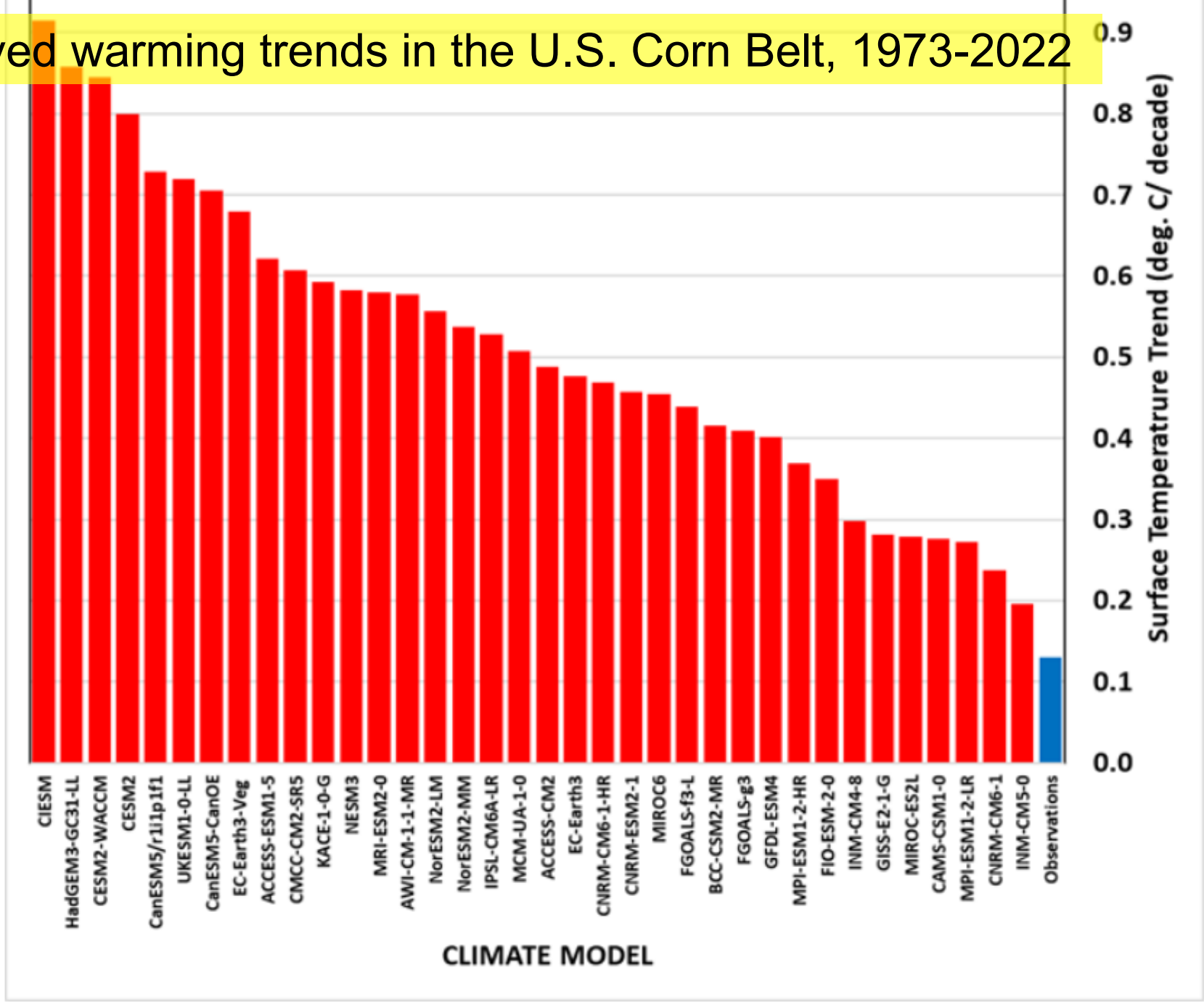


Figure 5.9: Modeled versus observed warming trends in the U.S. Corn Belt, 1973-2022.

“5.8 U.S. Corn Belt

One of the largest discrepancies between models and observations is in the U.S. Corn Belt, a region of particular importance to global food production. Figure 5.9 shows the warming trends for summertime (June, July, August) for the 12-state Corn Belt (IN, IA, IL, ND, SD, MO, MN, WI, MI, OH, KS, NE) during 1973-2022. All 36 climate models (red) warm far too rapidly compared to observations (blue)”

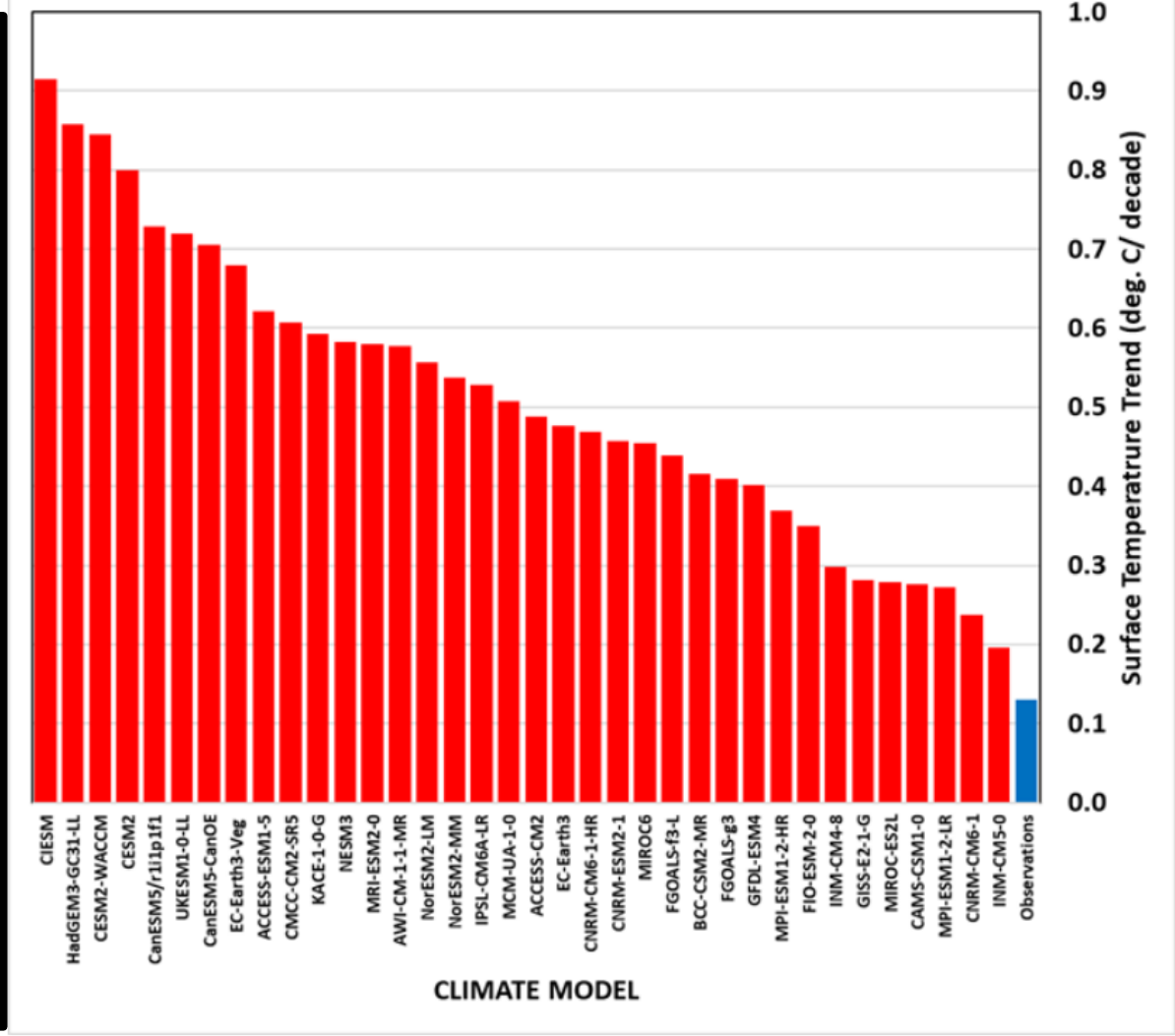


Figure 5.9: Modeled versus observed warming trends in the U.S. Corn Belt, 1973-2022.

“… for many key applications that require regional climate model output or for assessing large-scale changes from small scale processes, we believe that **the current generation of models is not fit for purpose.”** (Palmer and Stevens 2019) <Bold in original>

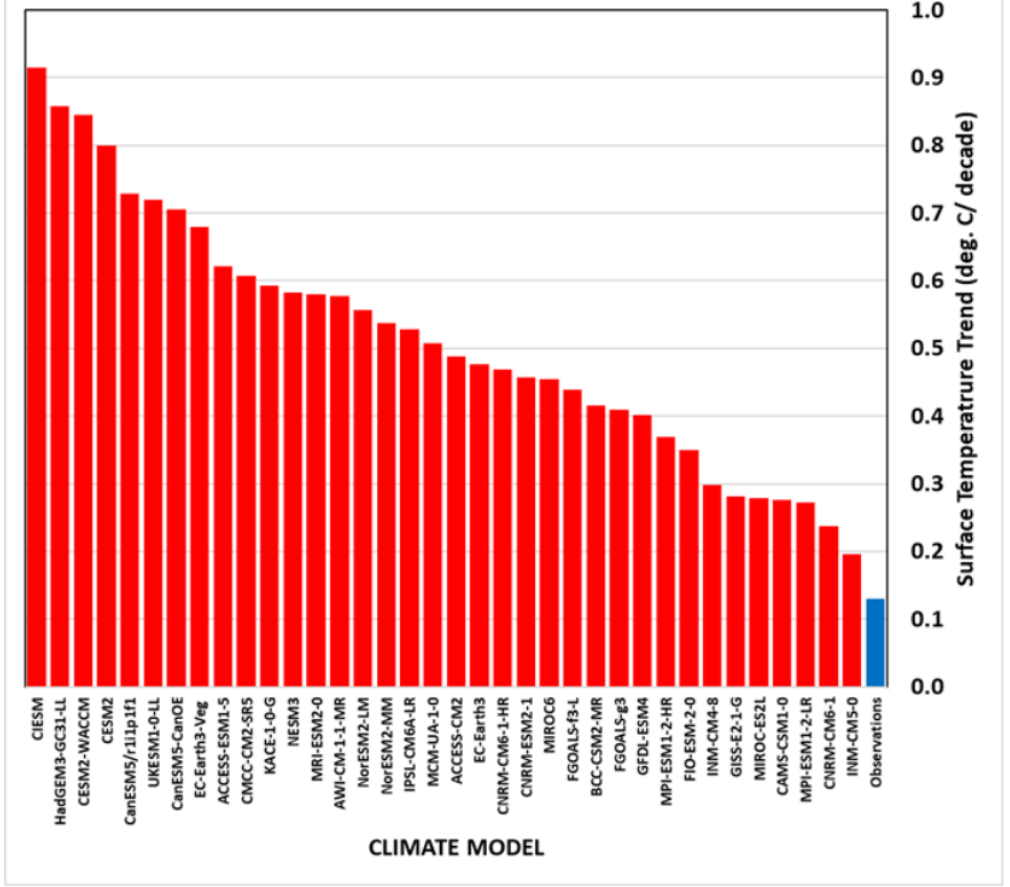


Figure 5.9: Modeled versus observed warming trends in the U.S. Corn Belt, 1973-2022.

"To summarize:

- Climate models show warming biases in many aspects of their reproduction of the past few decades.
- They produce too much warming at the surface (except in the models with lowest ECS), too much warming in the lower-and mid-troposphere and too much amplification of warming aloft."

12 GLOBAL CLIMATE IMPACTS OF U.S. EMISSIONS POLICIES

Chapter Summary

U.S. policy actions are expected to have undetectably small direct impacts on the global climate and any effects will emerge only with long delays.

12.1 The scale problem

The emissions rates and atmospheric concentrations of criteria air contaminants are closely connected because their lifetimes are short and their concentrations are small; when local emissions are reduced the local pollution concentration drops rapidly, usually within a few days. <Example, Next Slide>

But the global average CO2 concentration behaves very differently, since emissions mix globally and the global carbon cycle is vast and slow. Any change in local CO2 emissions today will have only a very small global effect, and only with a long delay.

Weather Support to the 390th Strategic Missile Wing (Titan 2) Davis-Monthan AFB

The calculation of Titan 2 missile toxic corridors is a subject with which member Jon Kahler and I have direct experience, from our US Air Force Active-Duty days.

Bob Endlich

bendlich@msn.com

Cruces Atmospheric Sciences Forum

“Following the emission of a pulse (release) of CO2 into the atmosphere, only about 40± 15 percent of the extra CO2 will have been sequestered after twenty years. That fraction rises to 75± 10 percent after a thousand years, and the remainder will be gradually removed over the ensuing tens of thousands of years
(Ciais et al., 2013, pp. 472-473).

Consequently, any reduction in U.S. emissions would only modestly slow,
but not prevent, the rise of global CO2 concentration. And even if global emissions were to stop tomorrow, it would take decades or centuries to see a meaningful reduction in the global CO2 concentration and hence human influences on the climate.”

“…Thus, in contrast with conventional air pollution control, even drastic local actions will have negligible local effects, and only with a long delay. The practice of referring to unilateral U.S. reductions as “combatting climate change” or “taking action on climate” on the assumption we can stop climate change therefore reflects a profound misunderstanding of the scale of the issue.”

12.2 Case study: U.S. motor vehicle emissions

The scale problem can be illustrated with reference to U.S. motor vehicles.

The EPA's 2009 Endangerment Finding focused on CO2 emissions from cars and light-duty trucks in the U.S. because Section 202(a) of Clean Air Act mandates the EPA to set emissions standards for motor vehicles if pollutants are found to endanger public health or welfare.

The 2009 Endangerment Finding therefore obligated the EPA to regulate emissions from new motor vehicles, ostensibly to reduce or eliminate climate-related harms to the U.S. public.

Two questions that naturally arise are:

(1)How large a reduction in CO2 emissions would result from such regulation? and

(2) What would be the climate impact of such regulation?

The first question can be addressed by comparing U.S. vehicle-based CO2 emissions to the global total.

The second question can be addressed by using the fact that the reduction in global warming would be, according to the models relied upon by the EPA, proportional to the reduction in global emissions, keeping in mind that the change in the CO2 content of the atmosphere in any given year is the result of total global CO2 emissions, not just U.S. emissions.

In 2022, the emissions from U.S. cars and light duty trucks totaled 1.05 billion metric tons of carbon dioxide (GtCO2, EPA 2024). Meanwhile global CO2 emissions from energy use totaled 34.6 GtCO2 (Energy Institute 2024).

Hence, U.S. cars and light trucks account for only 3.0 percent of global energy-related CO2 emissions.

To a first approximation we can say that **even eliminating all U.S. vehicle-based emissions would retard the accumulation of CO2 in the atmosphere by a year or two over a century.**

It would also reduce the overall warming trend by at most about 3 percent. For the period 1979-2023, which has the most extensive global coverage of a variety of weather data types, warming trends are determined to a precision of about ±15 percent, **so the impact of reducing the rate of global warming by eliminating U.S. vehicle CO2 emissions would be far below the limits of measurability.**

Given that global-average temperature is the most direct climate change metric, impacts on any secondary climate metrics (e.g. severe weather, floods, drought, etc.) from reducing U.S. vehicle CO2 emissions would be even less measurable.

12.3 Concluding thoughts

This report supports a more nuanced and evidence-based approach for informing climate policy that explicitly acknowledges uncertainties. The risks and benefits of a climate changing under both natural and human influences must be weighed against the costs, efficacy, and collateral impacts of any "climate action", considering the nation's need for reliable and affordable energy with minimal local pollution.

Beyond continuing precise, un-interrupted observations of the global climate system, it will be important to make realistic assumptions about future emissions, re-evaluate climate models to address biases and uncertainties, and clearly acknowledge the limitations of extreme event attribution studies. An approach that acknowledges both the potential risks and benefits of CO2, rather than relying on flawed models and extreme scenarios, is essential for informed and effective decision-making.