

Errors in the 4th National Climate Assessment, released 23 Nov 2018, Black Friday



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Cruces Atmospheric Sciences Forum

15 Dec 2018

FOURTH NATIONAL CLIMATE ASSESSMENT

Volume II: Impacts, Risks, and Adaptation in the United States

The National Climate Assessment (NCA) assesses the science of climate change and variability and its impacts across the United States, now and throughout this century.

SUMMARY FINDINGS

REPORT CHAPTERS

OVERVIEW

DOWNLOADS

Volume I presents an assessment of the physical science underlying this report: science2017.globalchange.gov



The dark cover
is part of The
Dark Message:

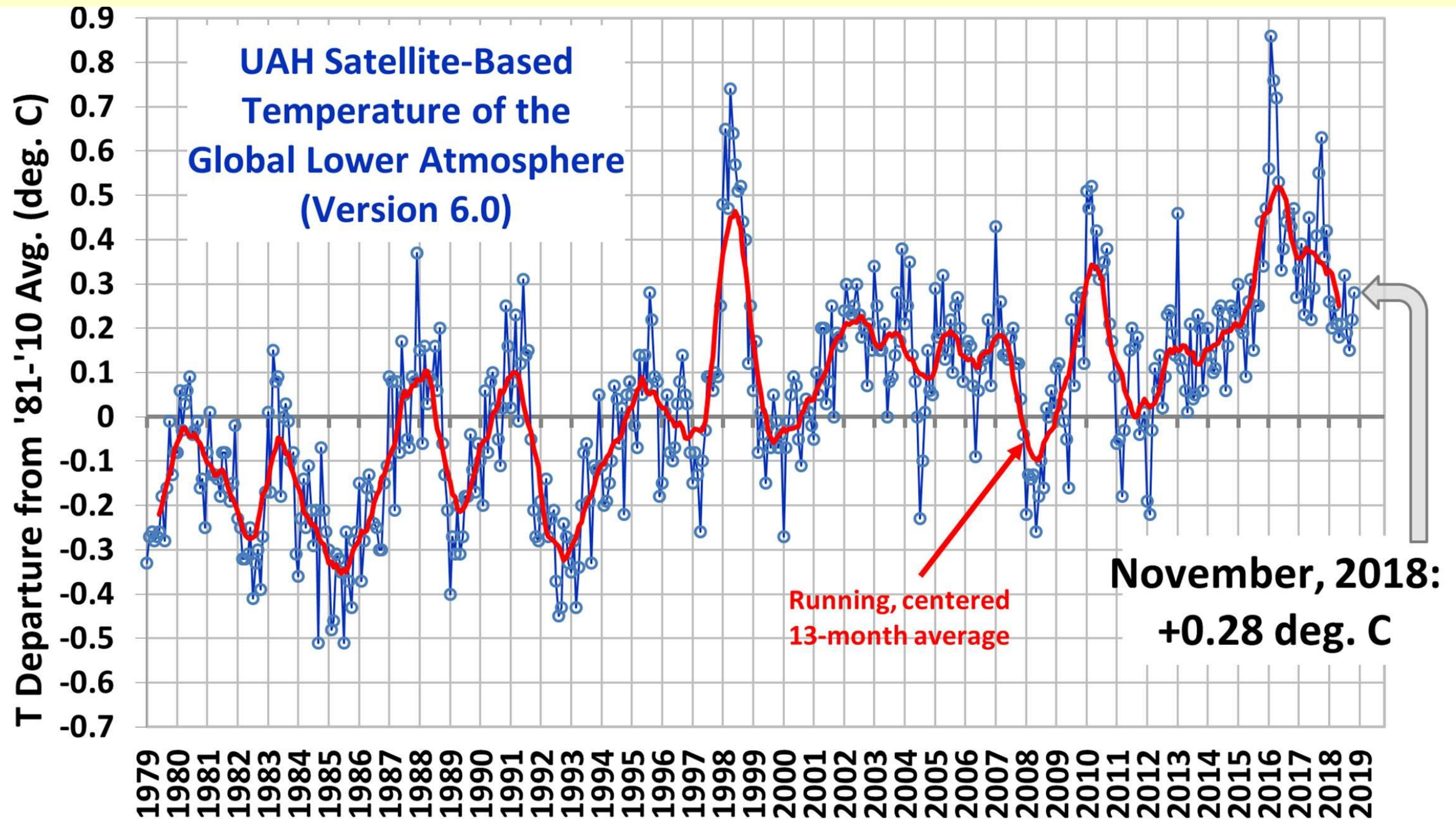
Fires dominating
an at-risk mountainside...

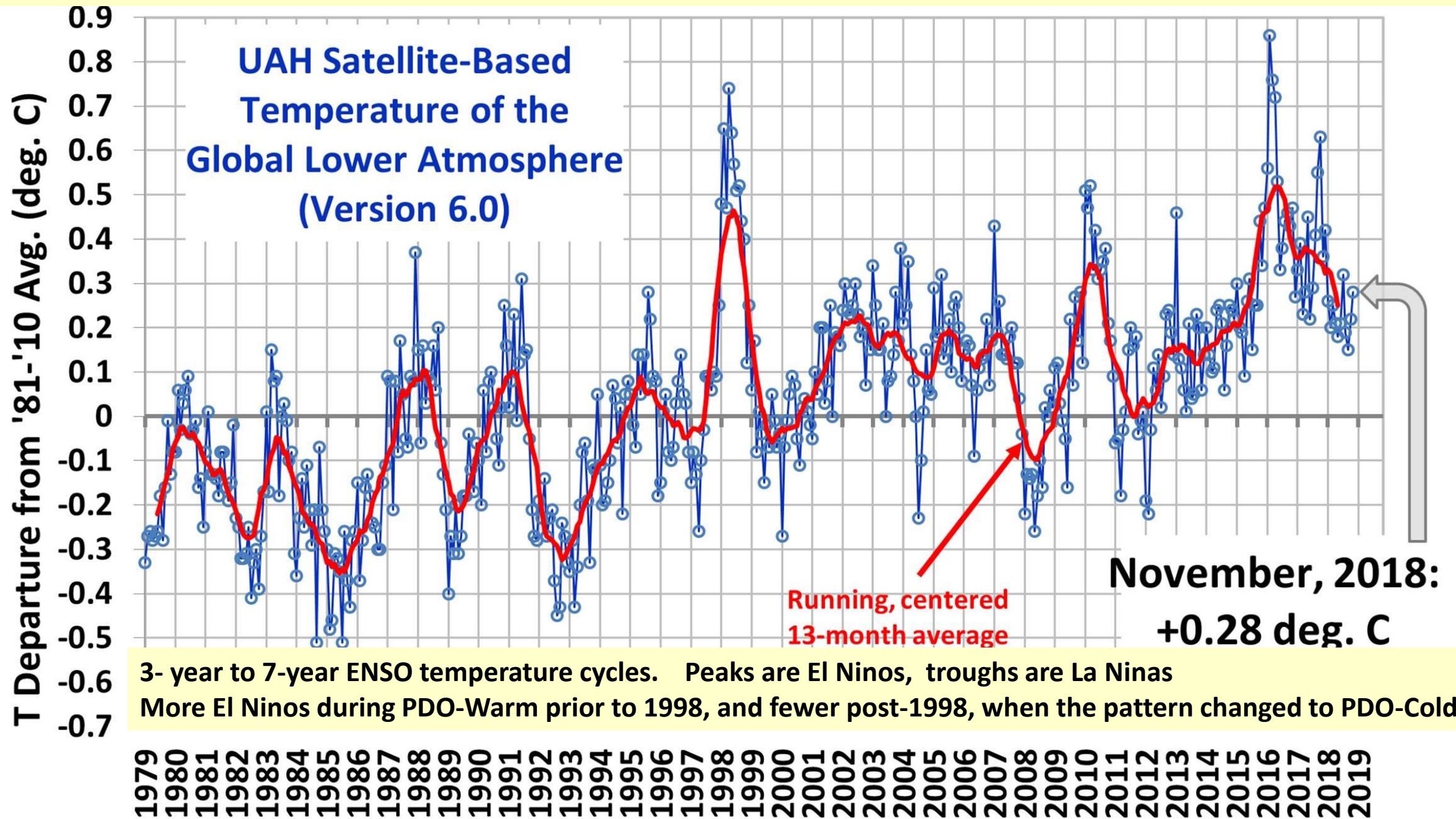
Climate Cycles:

Using the search function, I searched for the term *climate cycles* in the report.

There were hits on “climate” and “cycles” but not a single instance where the authors used the term *climate cycles*.

See any evidence for the existence of climate cycles in these paleoclimate plots?





Anomalies and Trends of Sea-Ice Extent and Atmospheric Circulation in the Nordic Seas during the Period 1864–1998

Feb 2001

Torgny Vinje Norwegian Polar Institute, Oslo, Norway



**Multi-year cycles in Nordic Sea Extent.
over the 140-year period of record**

Bob's analysis

**Smaller cycles appear to mimic the 3-year to
7-year periodicity of the ENSO cycles.**

**Others appear to mimic the 18 years between
the grand El Ninos in 1998 and 2016**

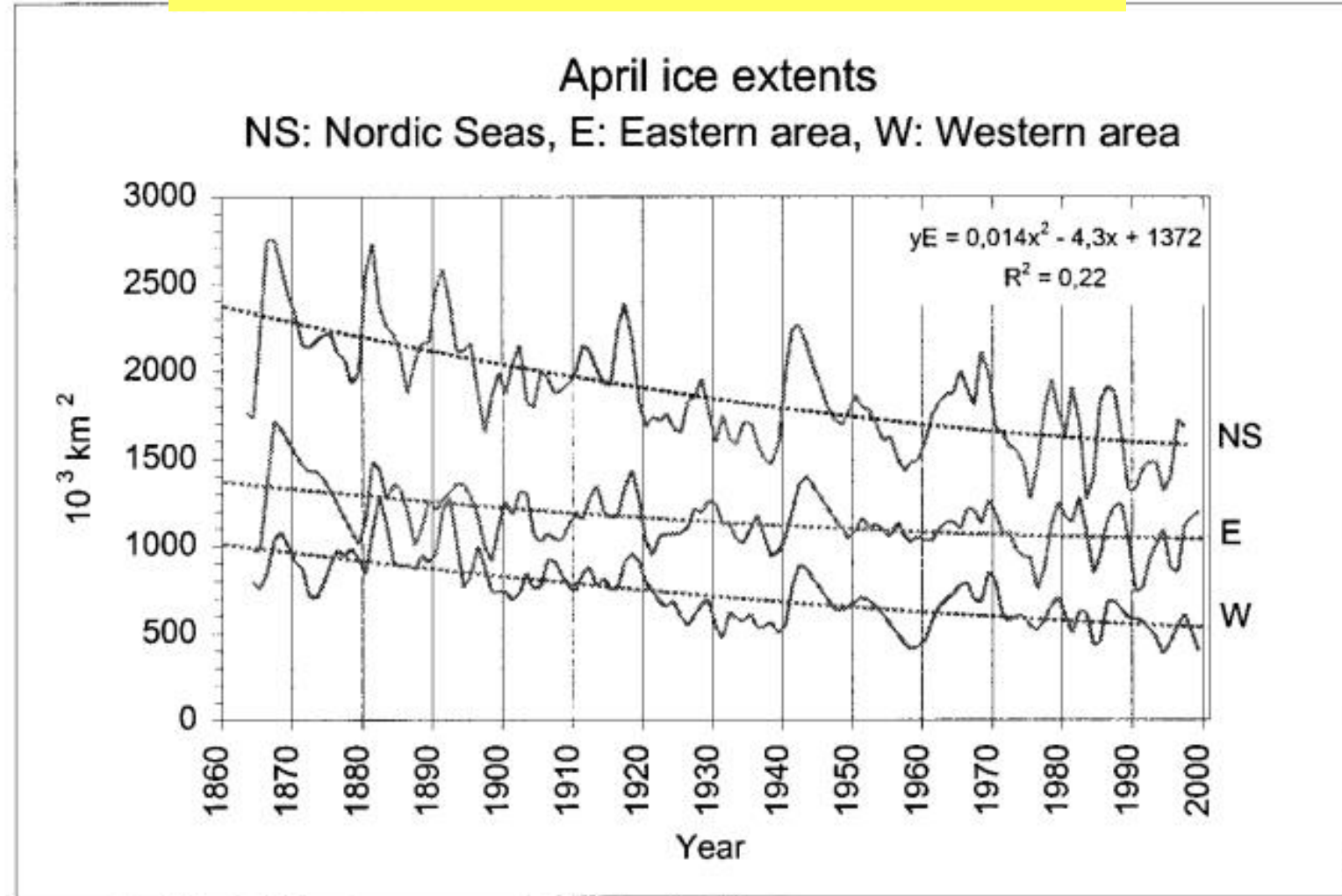
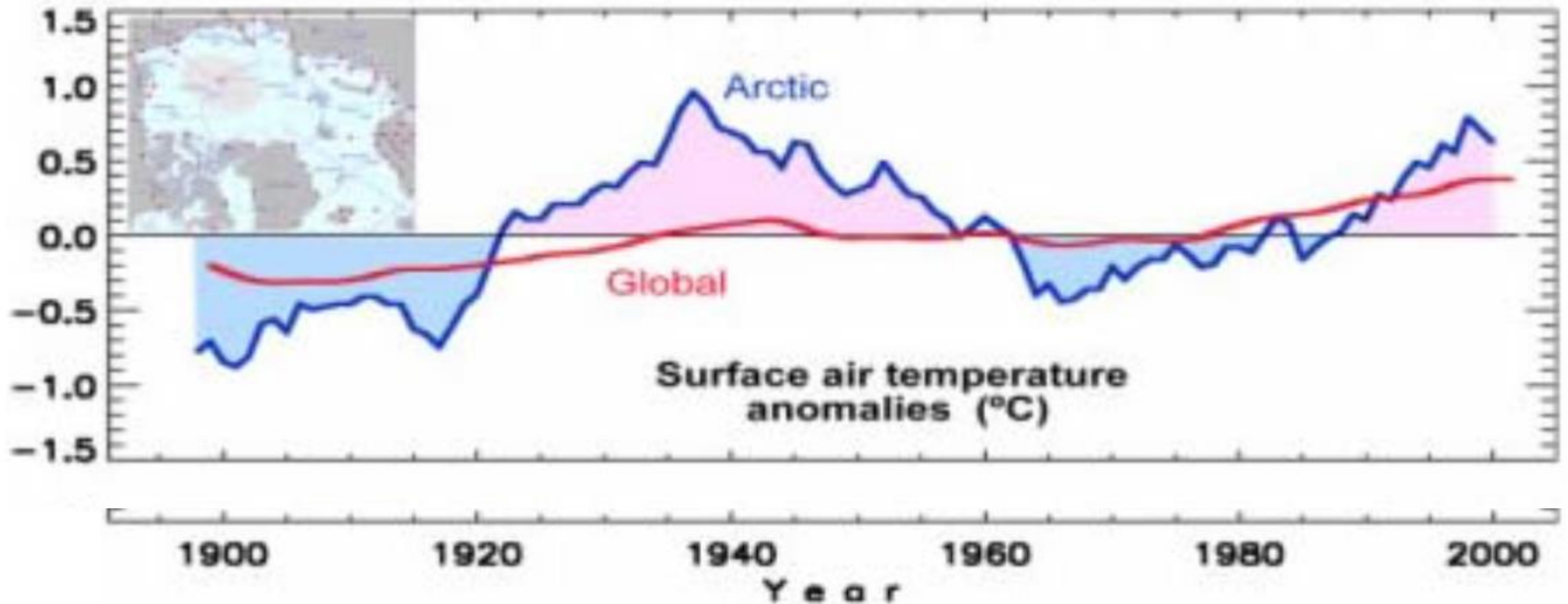


FIG. 2. Time series of the Apr ice extent in the Nordic Seas (NS), eastern area (E), and western area (W) given by 2-yr running mean and regression lines. Linear year-to-year interpolations of the ice extent have been made for the western area for 1940 and 1944–46, and for the eastern area for 1868–70, 1874–78, 1880, 1892, 1894, 1940–41, 1943–48, and 1961. Observations for Apr

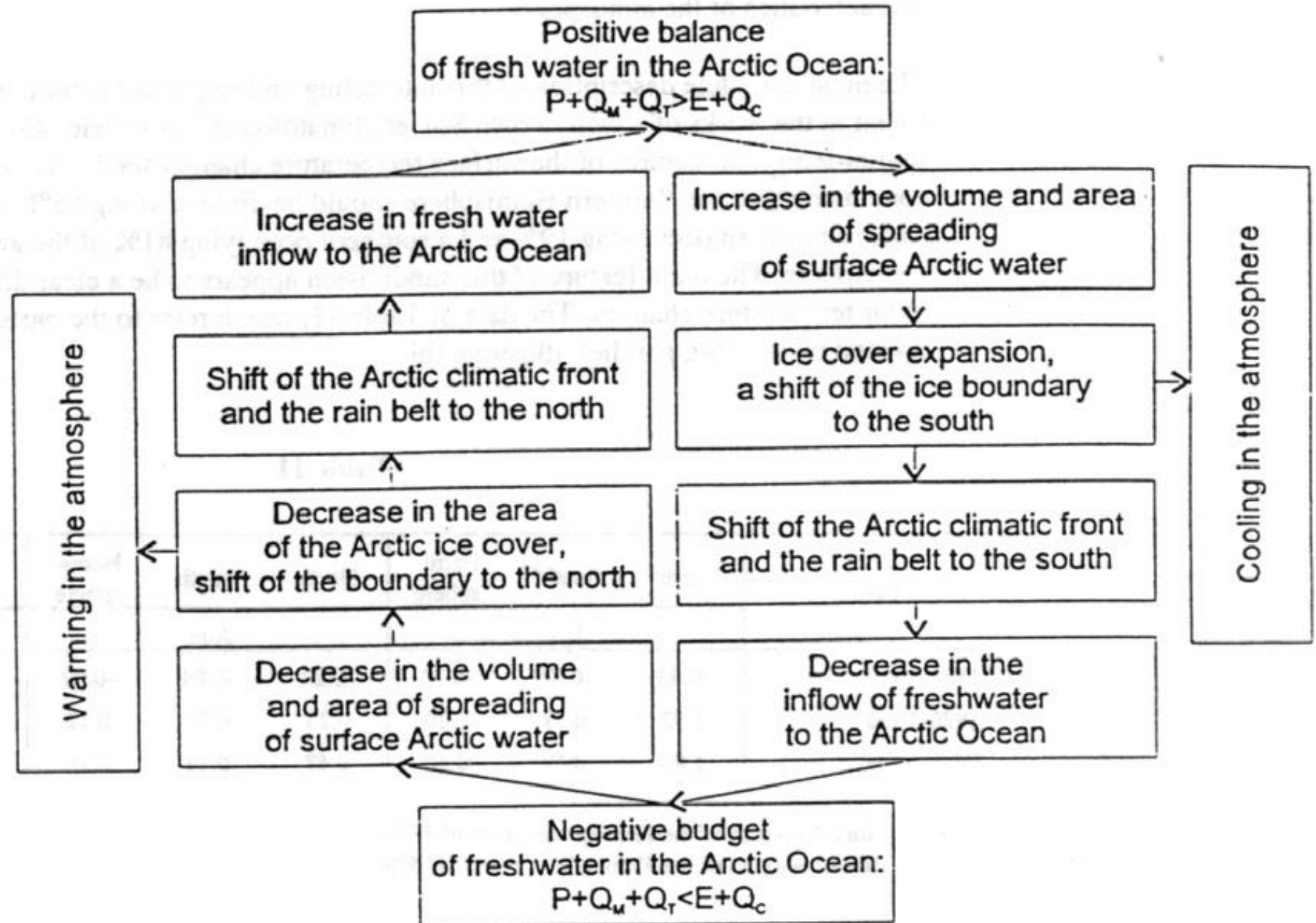


Red Line: Global Temperature anomaly. Shows no second half 20th century warming until 1978
Very long term rise artifact of 1000-year Bond Cycle?

Blue Line: Arctic shows peak in 1938 and 1998, a 60-year periodicity

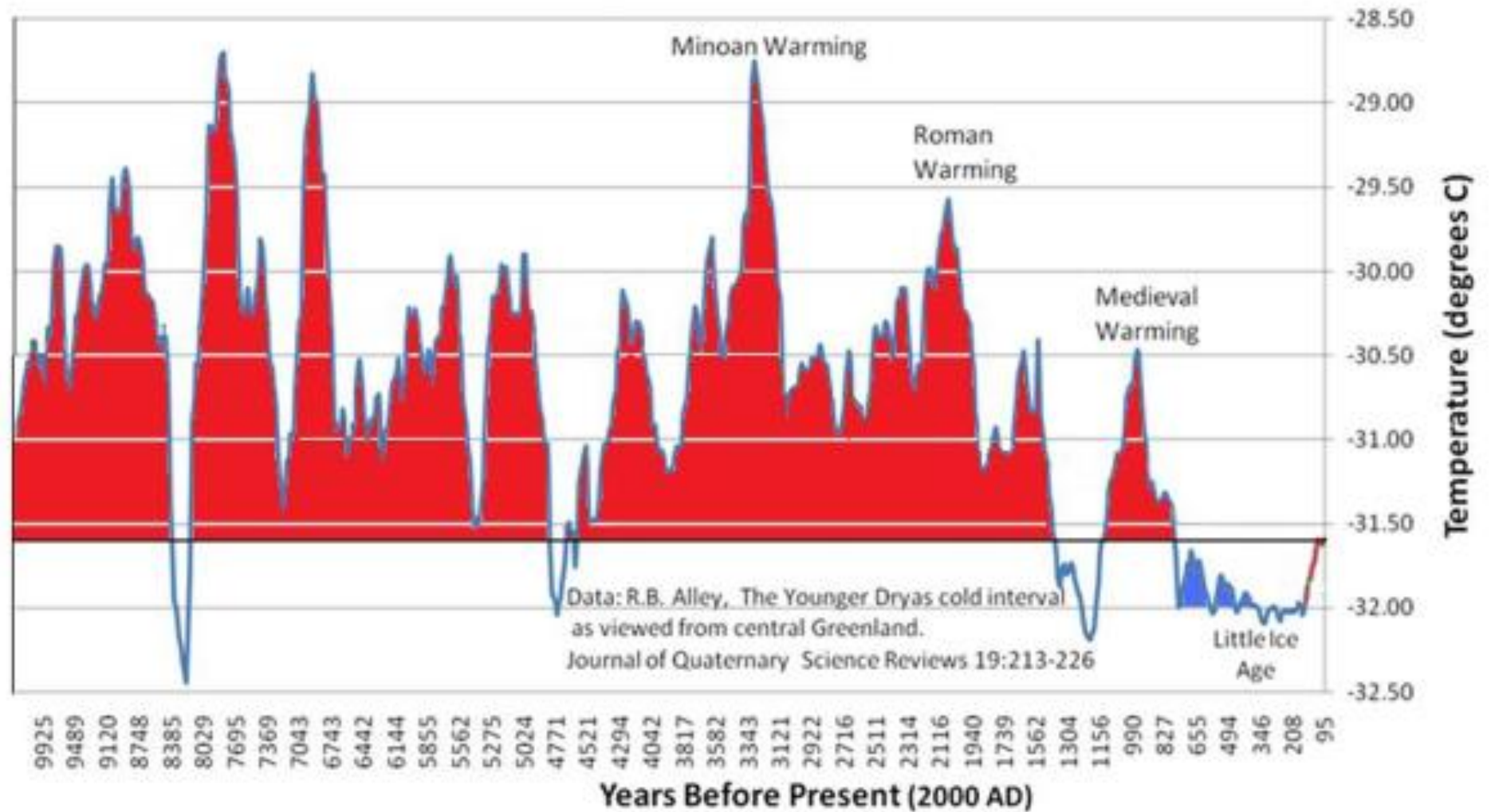
Zakharov fig.24

This sounds like a plausible explanation for periodicities in Arctic Ice analyzed by Torgne Vinje.





Greenland GISP2 Ice Core - Temperature Last 10,000 Years



X-Axis, Time

Oldest on Left,

Present on Right

Y-Axis, Temperature

from the O16/O18 ratio, Greenland GISP2 Ice Core

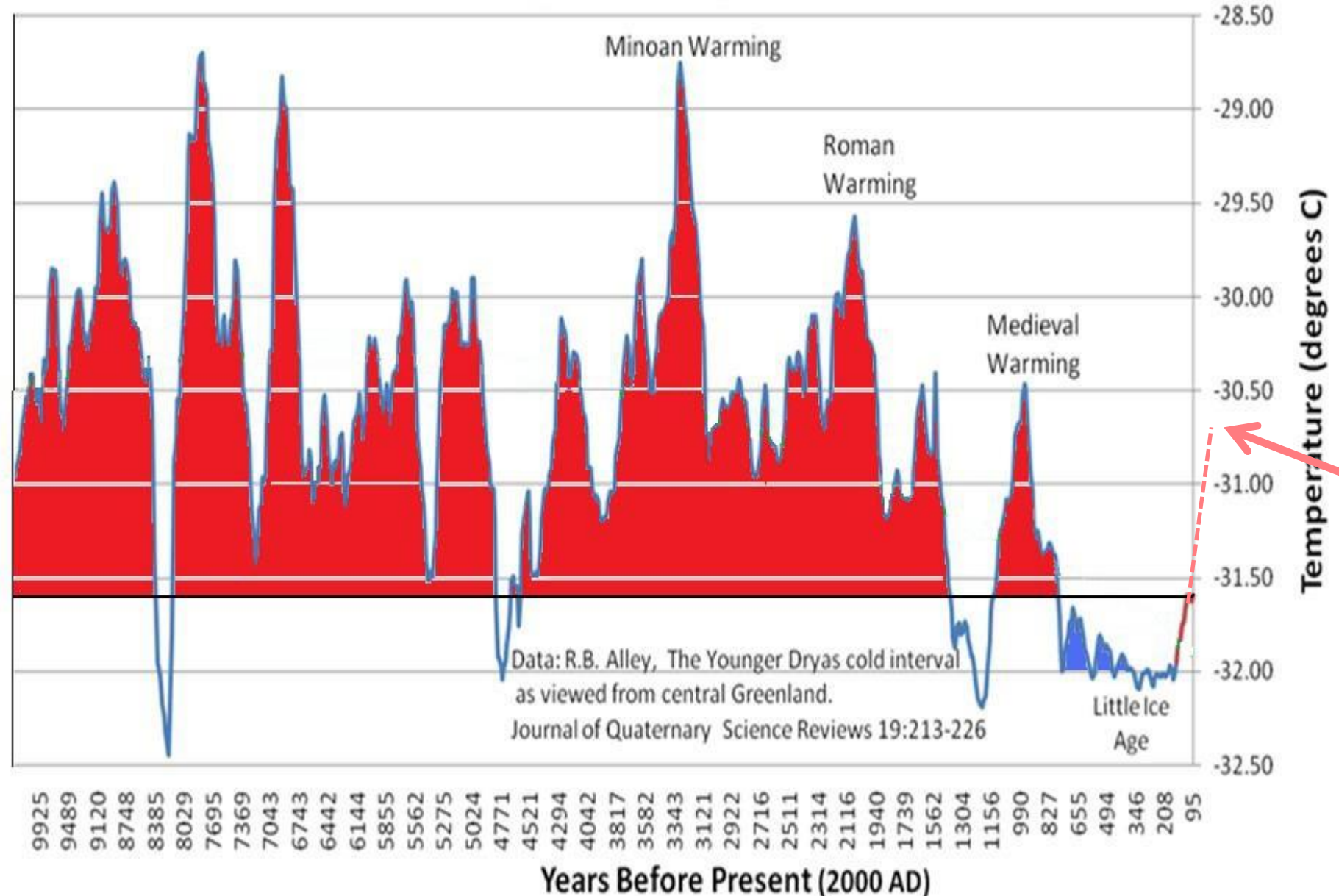
Coldest Down, Warmer Up.

Greenland GISP2 Ice Core - Temperature Last 10,000 Years

<http://wattsupwiththat.files.wordpress.com/2013/03/gisp2-ice-core-temperatures.jpg?w=960&h=720>

Four recent peaks
Minoan, Roman, Medieval,
and Present: obviously the
1000-1450 year Bond Cycles

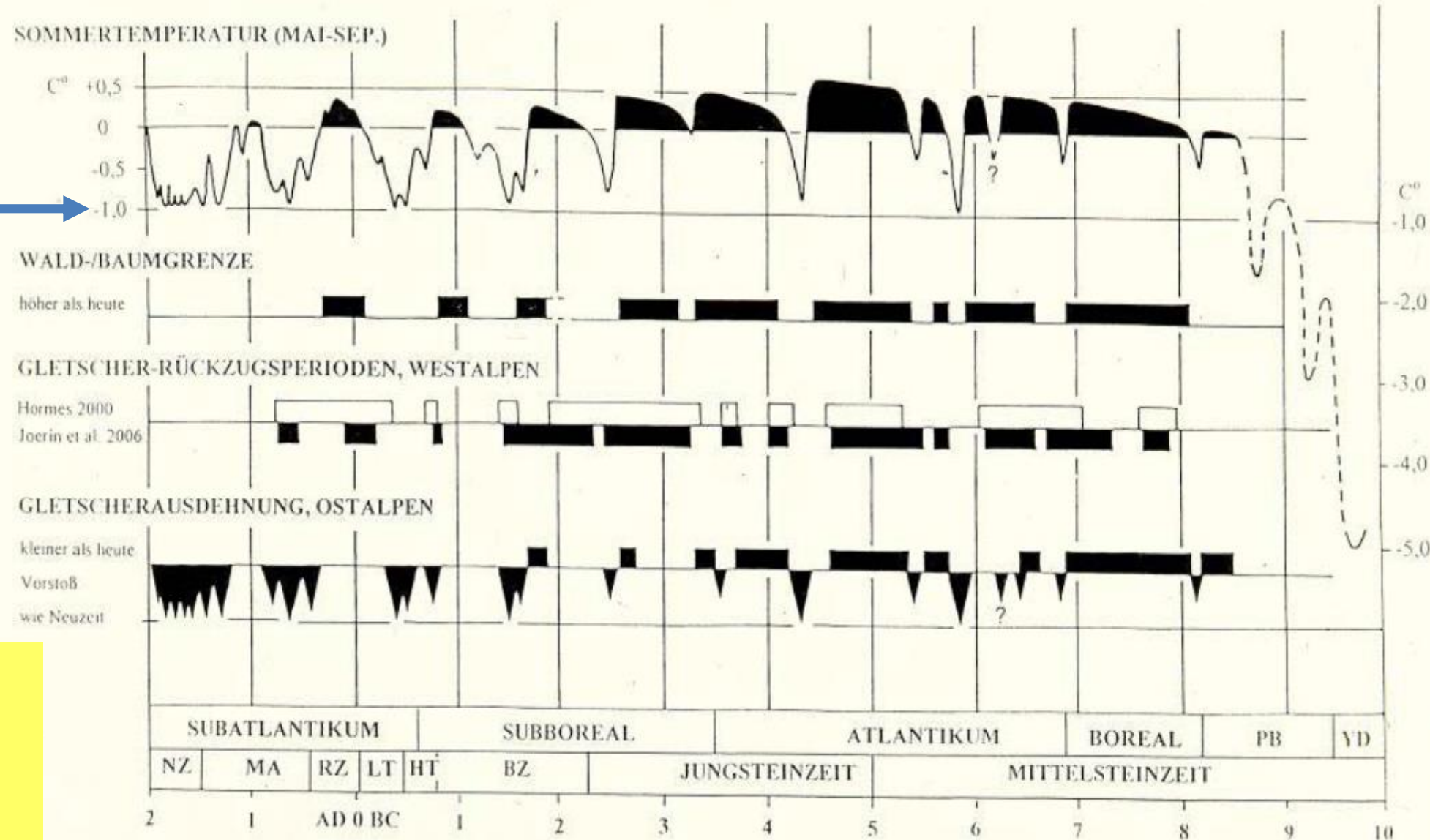
“A Pervasive Millennial-Scale
Cycle in North Atlantic
Holocene and Glacial Climates,”
Bond, G., et al, SCIENCE,
14 Nov 1997.



Glaciers as Climate Witness, Gletscher als Klimazeugen

http://www.iuf-berlin.org/wm_files/wm_pdf/prof._patzelt_berlin_4.12.2009.pdf

Summer Temperatures,
May to September

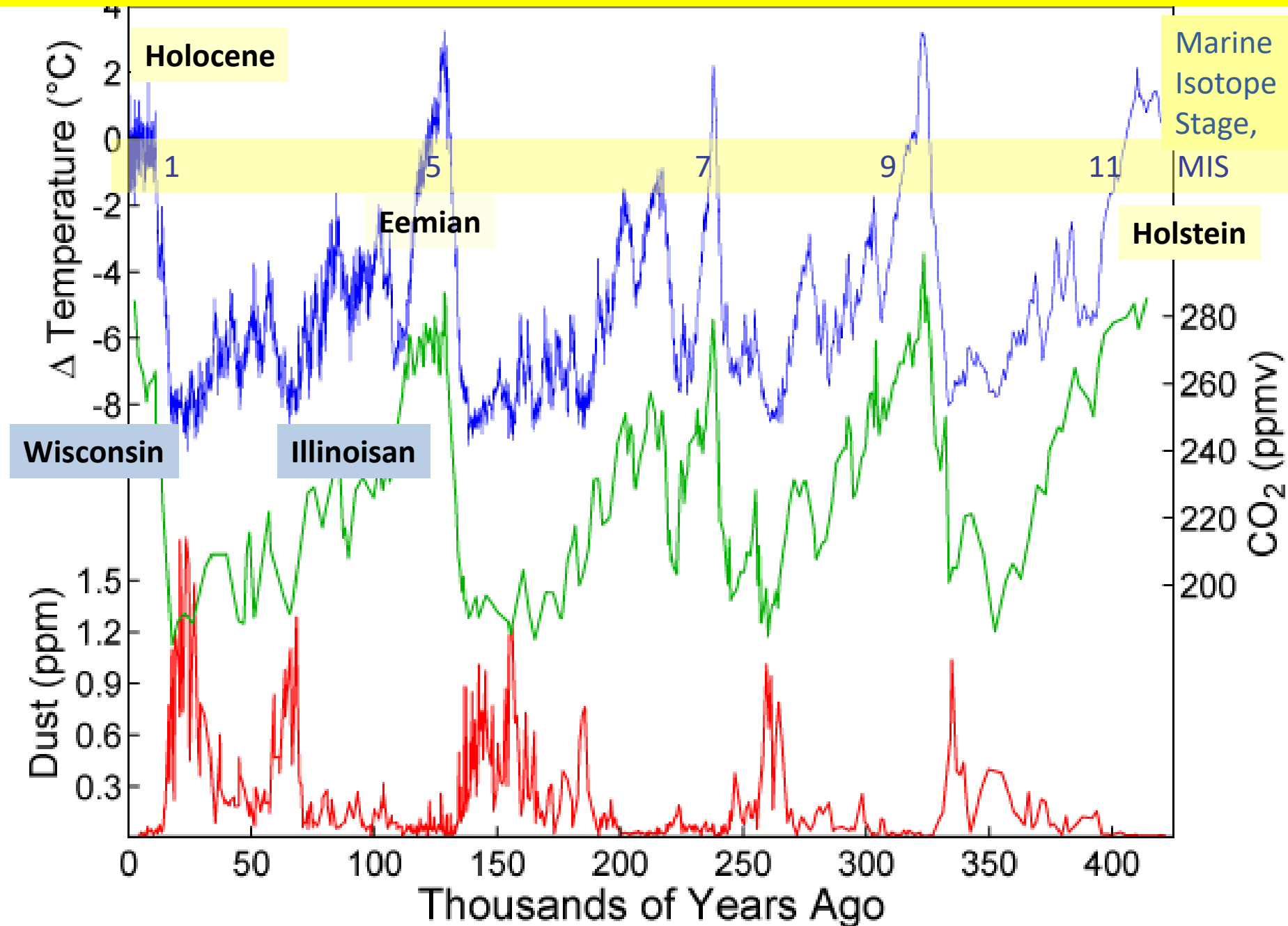


~Thirteen Bond
Cycles in tree ring
records from the
Alps.

Blue curve: Temp Deg C

Five Interglacials in the past 400,000 years. This one is the coolest with highest <CO₂>

Quasi-100,000 year cycle in the past 400,000 years of temperature data (blue curve)



The reaction of the Trump administration? Dump the news on Black Friday and continue to pursue policies that make the problem worse. **President Trump and his EPA administrators have pushed to allow more carbon and other climate pollution from cars, trucks, oil and gas operations, and power plants.** They've worked to cut funding for climate research and removed important information about climate change from government web sites. And they've made the United States into an international outcast as the only country seeking to leave the Paris climate agreement and avoid its responsibility to **solve this problem.**

Bold Added

Elizabeth Gore is Environmental Defense Fund's senior vice president of political affairs.

Trump's EPA Plans To Ease Carbon Emissions Rule For New Coal Plants



Trump's EPA Plans To Ease Carbon Emissions Rule For New Coal Plants



Back lighting at low sun angle. Results in orange color, and makes the water droplets a sinister black shade.

NPR's "subtle" use of color to enhance the message

Pollution? "Carbon" Emissions?

They probably mean carbon dioxide emissions, that same colorless, odorless gas we exhale, which is essential for all animal and plant life

At higher sun angles, the water droplets show they are white; as the droplets evaporate, the clouds dissipate



New U.S. Climate Assessment Forecasts Dire Effects On Economy, Health



Volunteers search a mobile home park in Paradise, Calif.

Government scientists predict wildfires like the one that struck this community will contribute to billions in losses for the U.S. economy.

Climate change will be expensive

Some parts of the U.S. economy could suffer hundreds of billions of dollars in annual losses by the end of the century unless global greenhouse gas emissions are substantially reduced, the report finds. **Already, there's the impact of increasingly frequent and intense extreme weather events.** The report notes that large wildfires are more frequent and that the areas burned by lightning-ignited fires are "expected to increase by at least 30 percent by 2060." The costs for fighting fires and forest management are on the rise (see chart).

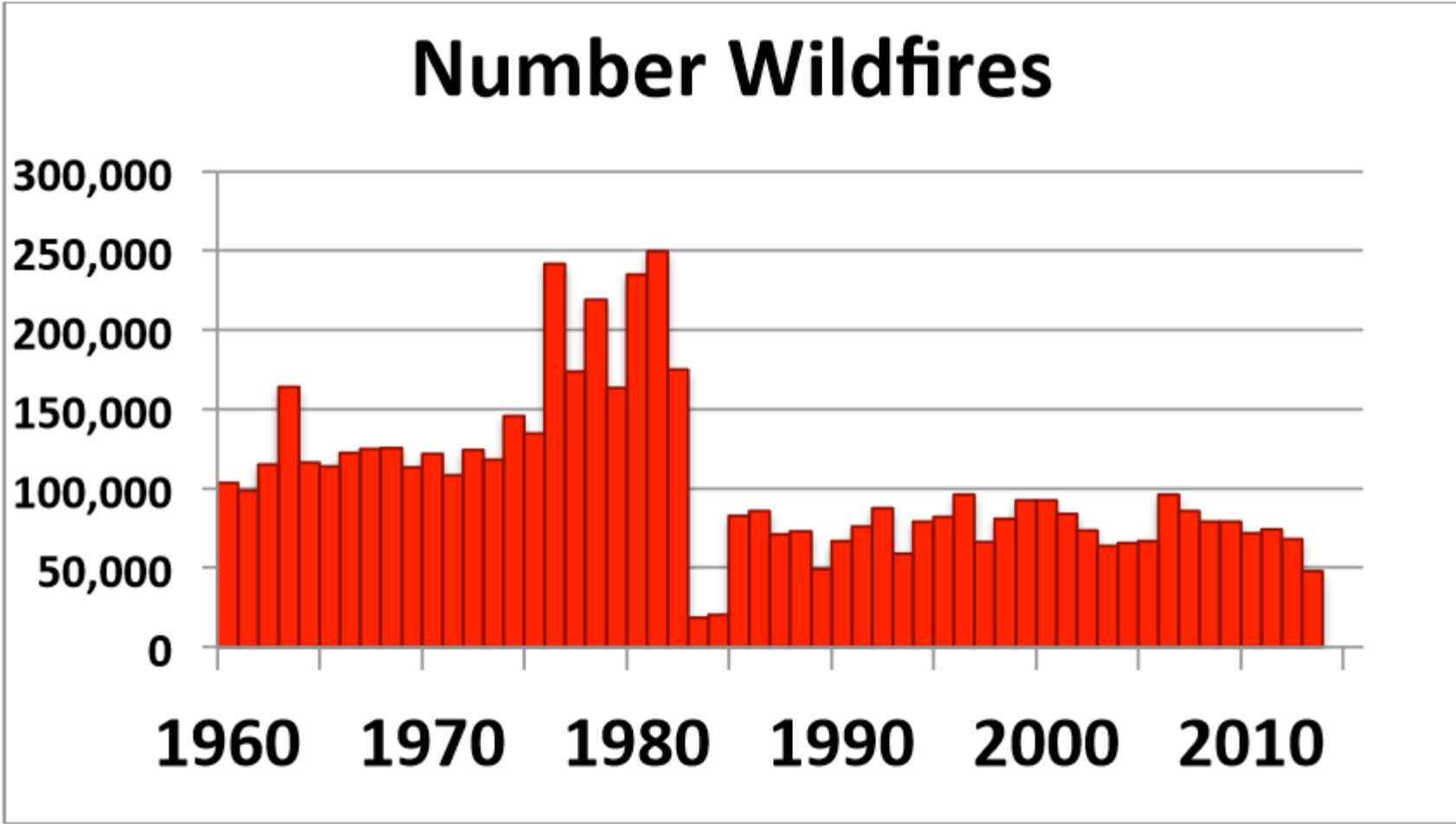
“Already, there's the impact of increasingly frequent and intense extreme weather events.”

So, we'll look at some data with respect to

- Wildfires
- Hurricane Frequency, Energy, and Frequency of Hurricane Strikes
- Tornado Frequency

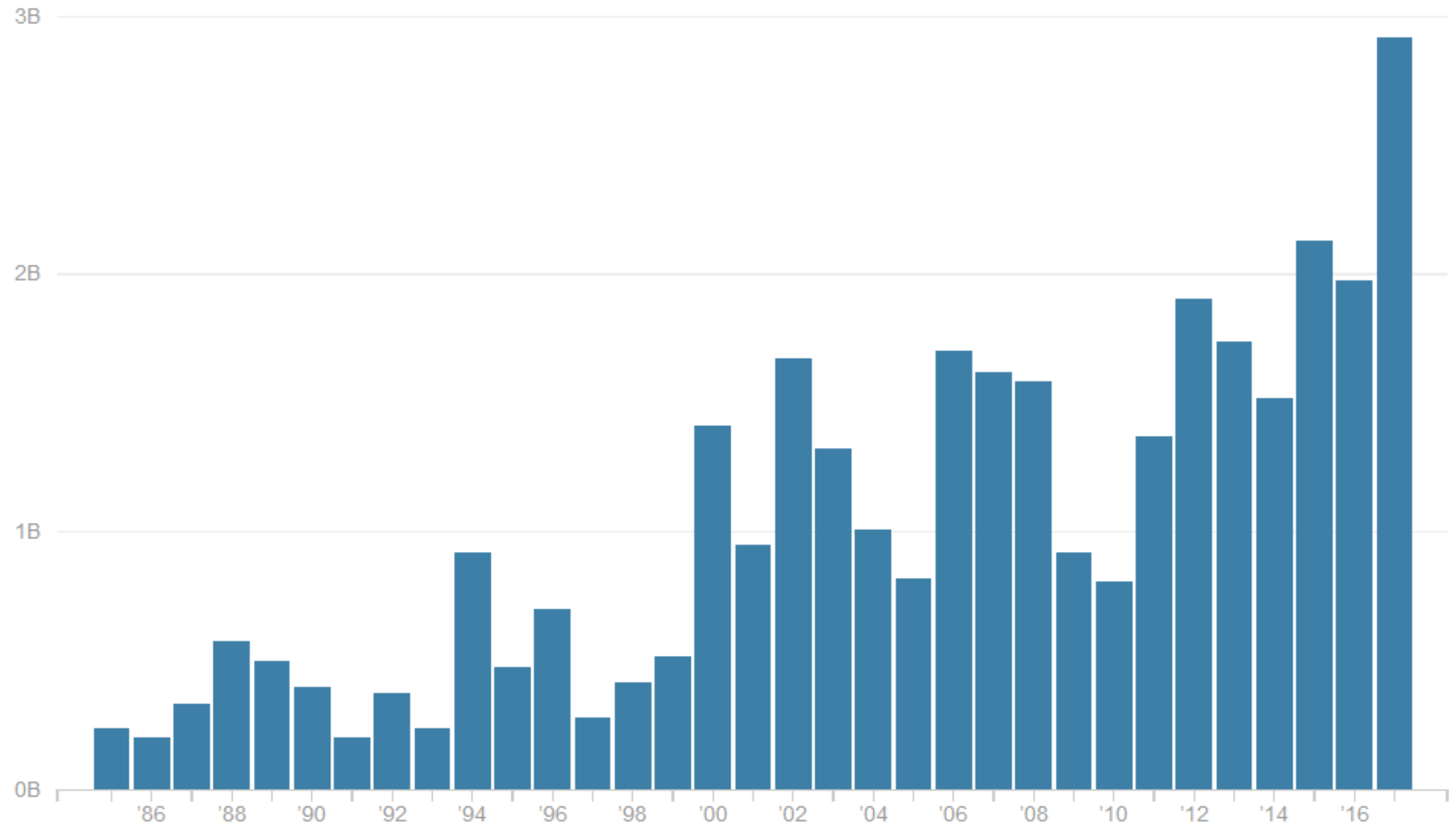
Extreme Weather Events

Large Fires



Above: Number of U.S. wildfires. As the management of these events changes, and thus the number also changes, but the number of events since 1985 has remained constant. (National Interagency Fire Center.)

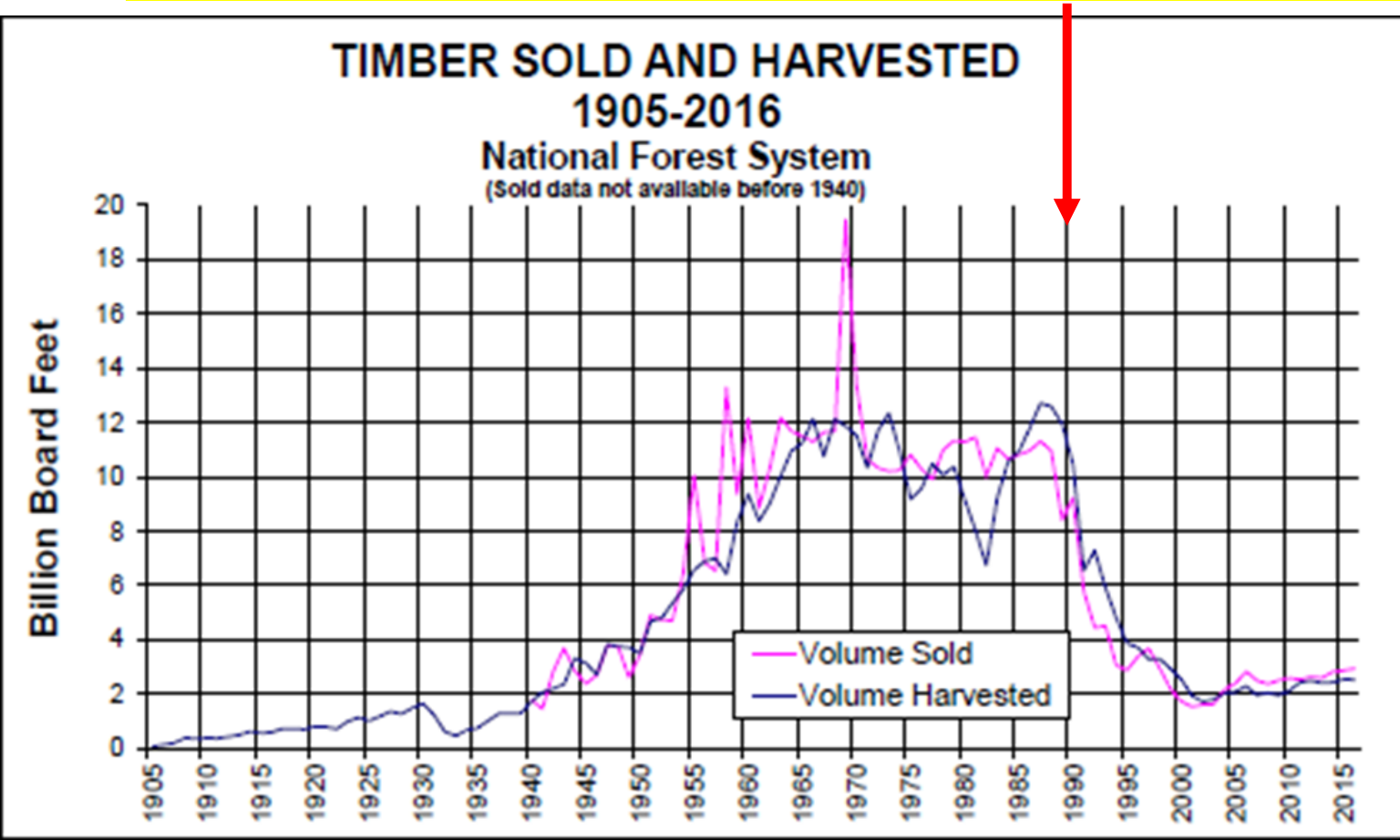
Billions Of Dollars Spent On Wildfire Suppression In The U.S. 1985-2017



1990s Spotted Owl controversy

- Spotted Owl listed as a threatened species under the ESA in 1990 throughout its range in northern California, Oregon, and Washington.
- 1991 Court order halted logging on national forests in those states on grounds those forests were prime spotted owl habitats.
- Logging all but stopped on western forests as graph shows.

Precipitous logging decline after 1990 is especially telling.



Red arrow points to 1990

Cause and Effect?

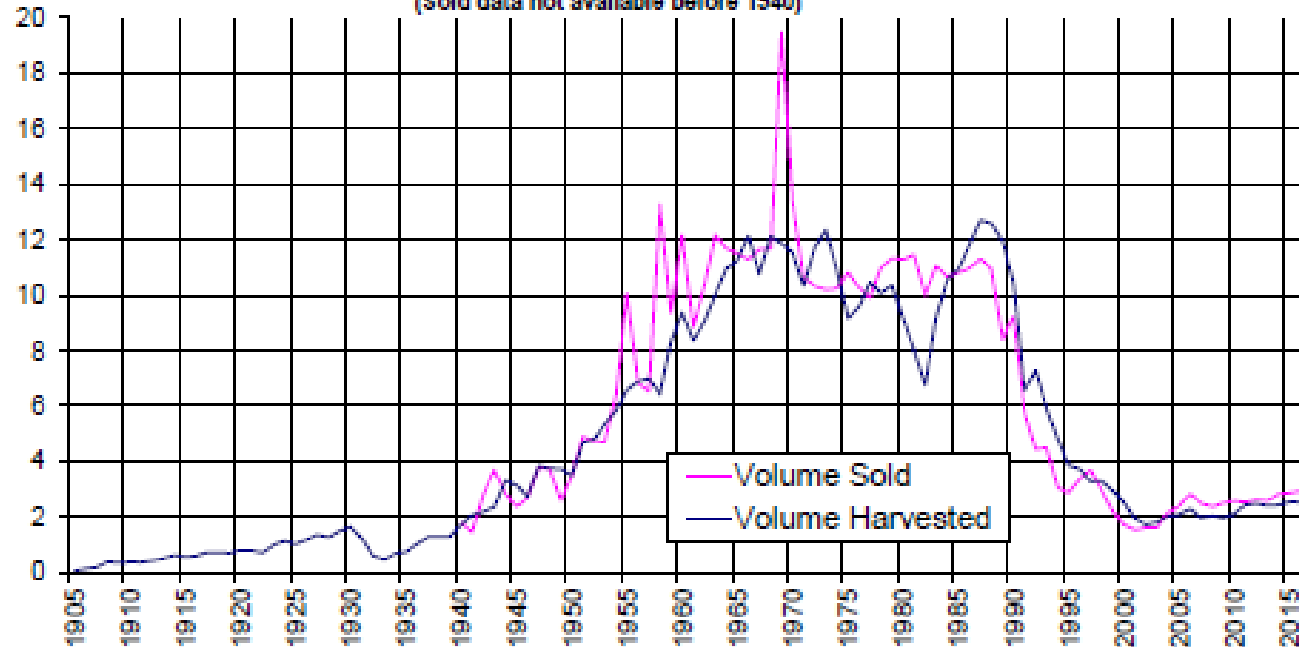
As the harvest in board feet was reduced, the stage was set for increasing dollar amounts needed for fire suppression.

Red arrows point to 1995.

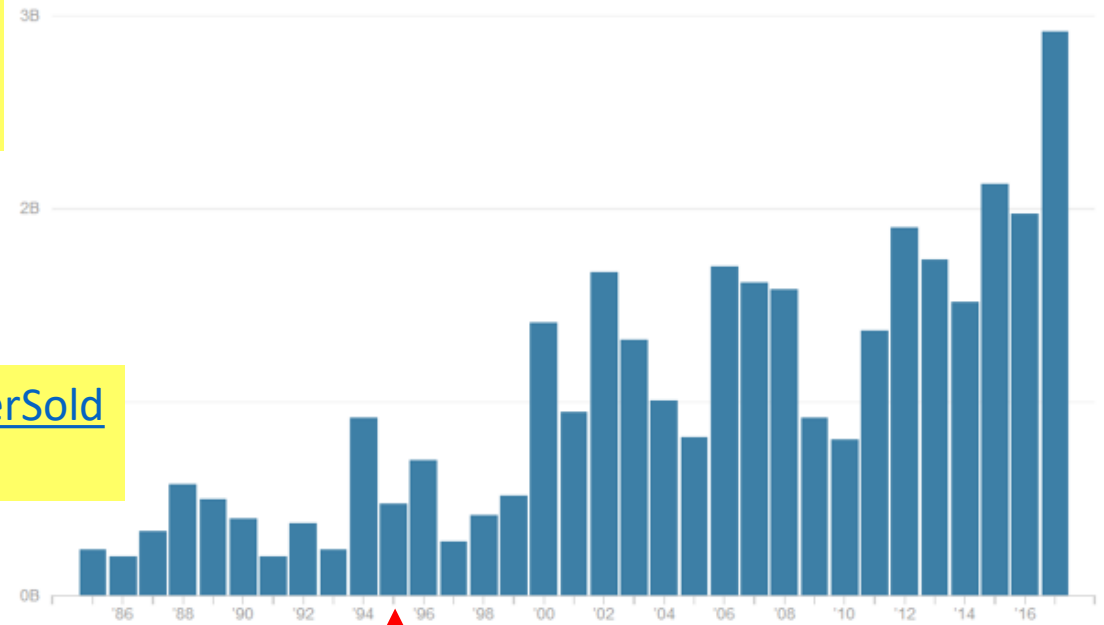
<https://www.fs.fed.us/forestmanagement/products/images/TimberSoldHarvested1905-2016.png>

TIMBER SOLD AND HARVESTED 1905-2016

National Forest System
(Sold data not available before 1940)



Billions Of Dollars Spent On Wildfire Suppression In The U.S. 1985-2017



PDO Warm
Wet in West

PDO Cold
Dry in West

<https://www.npr.org/2018/11/26/670812889/what-you-need-to-know-about-the-new-u-s-climate-assessment>

Green Arrow Points to 1998, when PDO shifted From Warm to Cold, and from Wet to Dry



Successful management of any complex environmental system requires complicated tradeoffs between various objectives: preservation of diverse species, fire prevention, construction of dams and waterways, harvesting of timber.

- Tempered approach of balancing costs/benefits of environmental regulations scuttled by Supreme Court: Tennessee Valley Authority v. Hill (1978)
- Took the position-- recent discovery of a new endangered species, snail darter, got priority over completion of the Tellico Dam, in final stages of construction.
- Notion of tradeoffs was pushed emphatically to the back burner.

Combination of Endangered Species Act and the National Environmental Policy Act shifted the environmental movement in the wrong direction.

- Result: an 80 percent reduction in the number of trees that were harvested and sold on public lands in California reducing the number of operating saw mills there from 149 in 1981 to 27 in 2017.
- Bureaucratic oversight /permit requirements before logging could begin.
- Management moved from managers on the ground with local knowledge of the situation to bureaucrats in distant places who lacked it.
- Preserving the environment was foremost, no matter how strong competing interests.
- Began restraint on cutting trees and clearing deadwood and underbrush. At no point was the process guided by insight “prophylactic measures today might prevent greater environmental destruction tomorrow.”
- Preventing strategic burns that might protect vulnerable sites, environmental policies created a situation where minor events, such as a spark from a power line or a stray cigarette butt, could cause disasters, large-scale loss of life and destruction of property, coupled with thick blankets of smoke that spread for miles.



It is an odd way of calculating priorities.

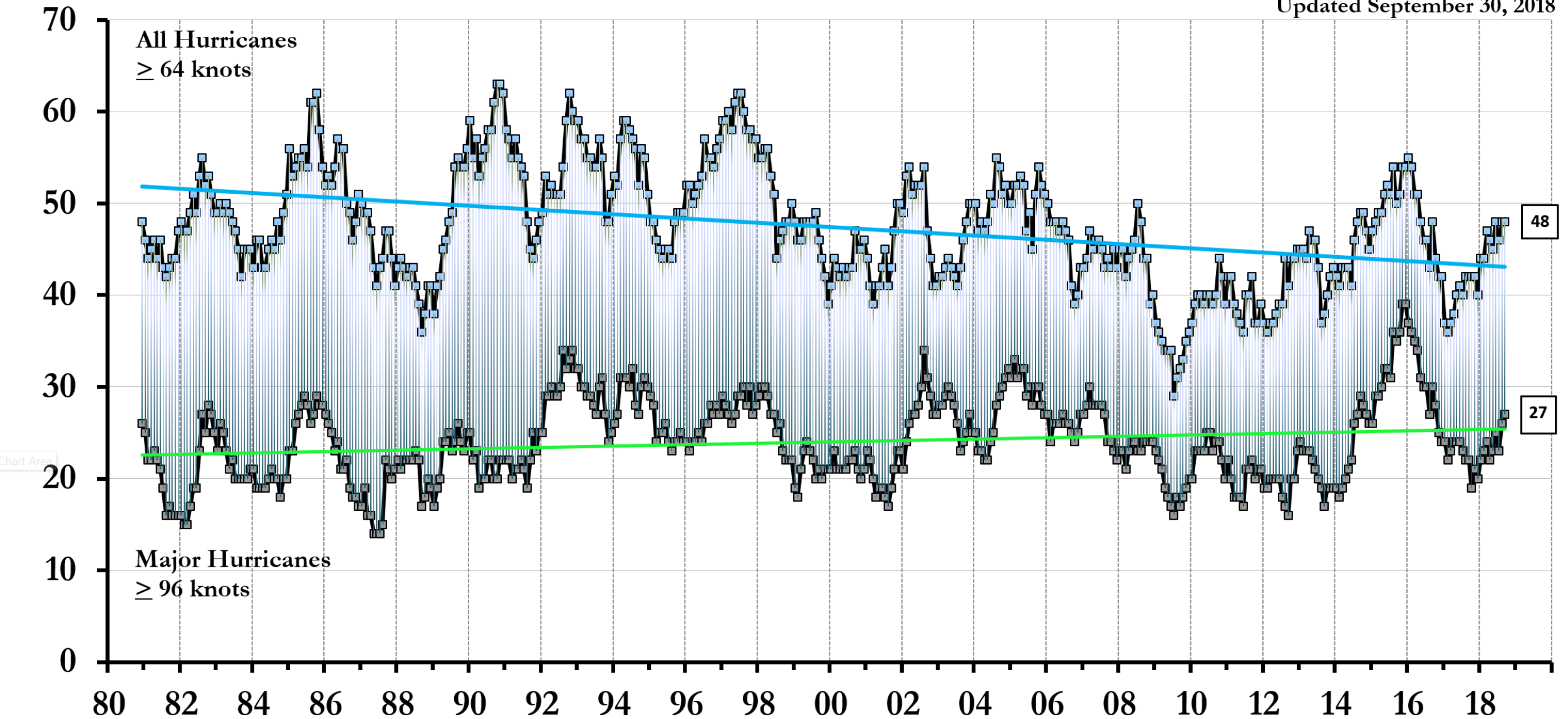
California and the federal government take immense steps to stop, for example, tailpipe emissions, which at their worst did not cause a fraction of the pollution that the forest fires are now creating throughout the state.

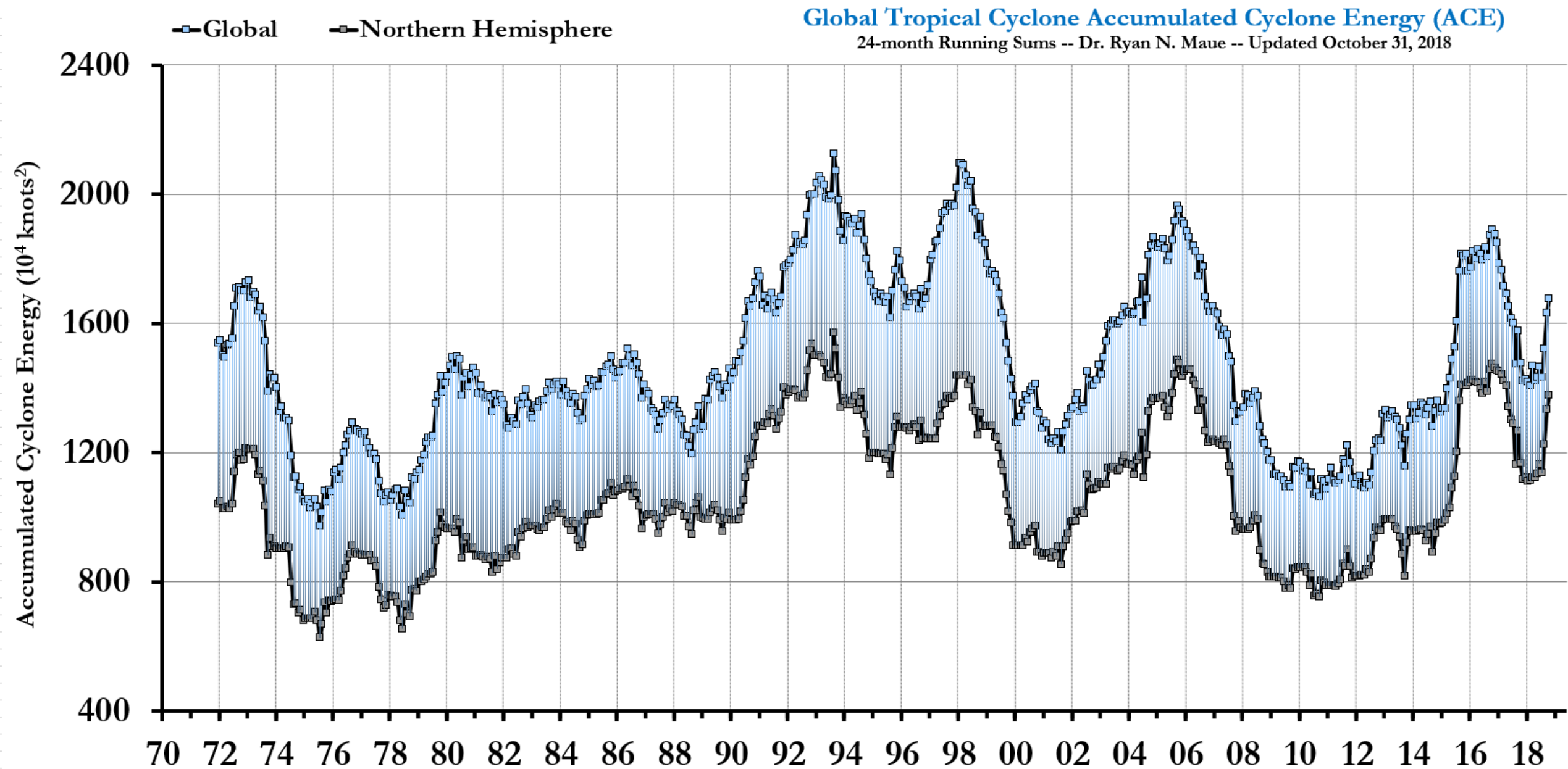
Extreme Weather Events

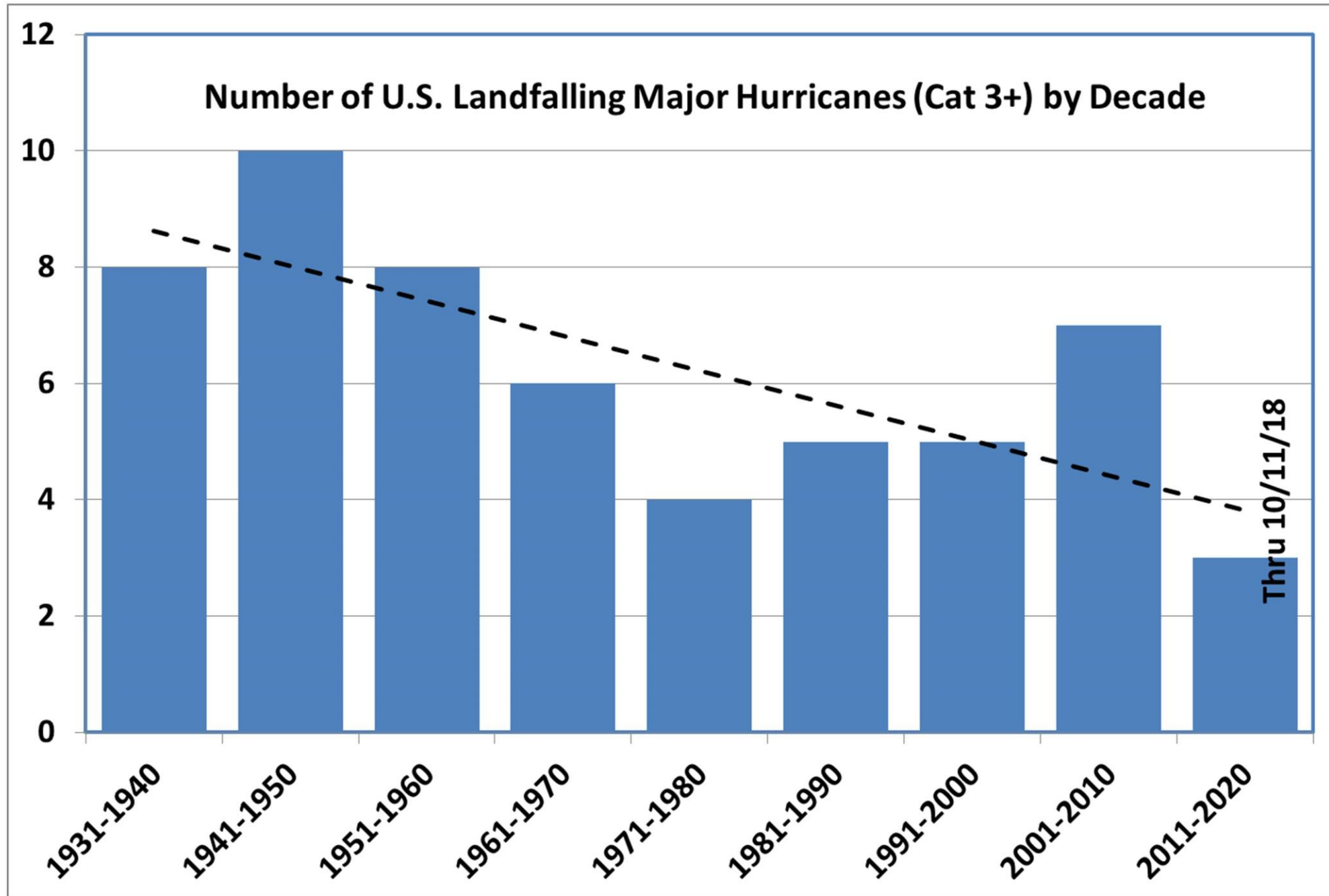
Hurricanes

Global Major Hurricane Frequency -- 12 month running sums

Dr. Ryan N. Maue
Updated September 30, 2018



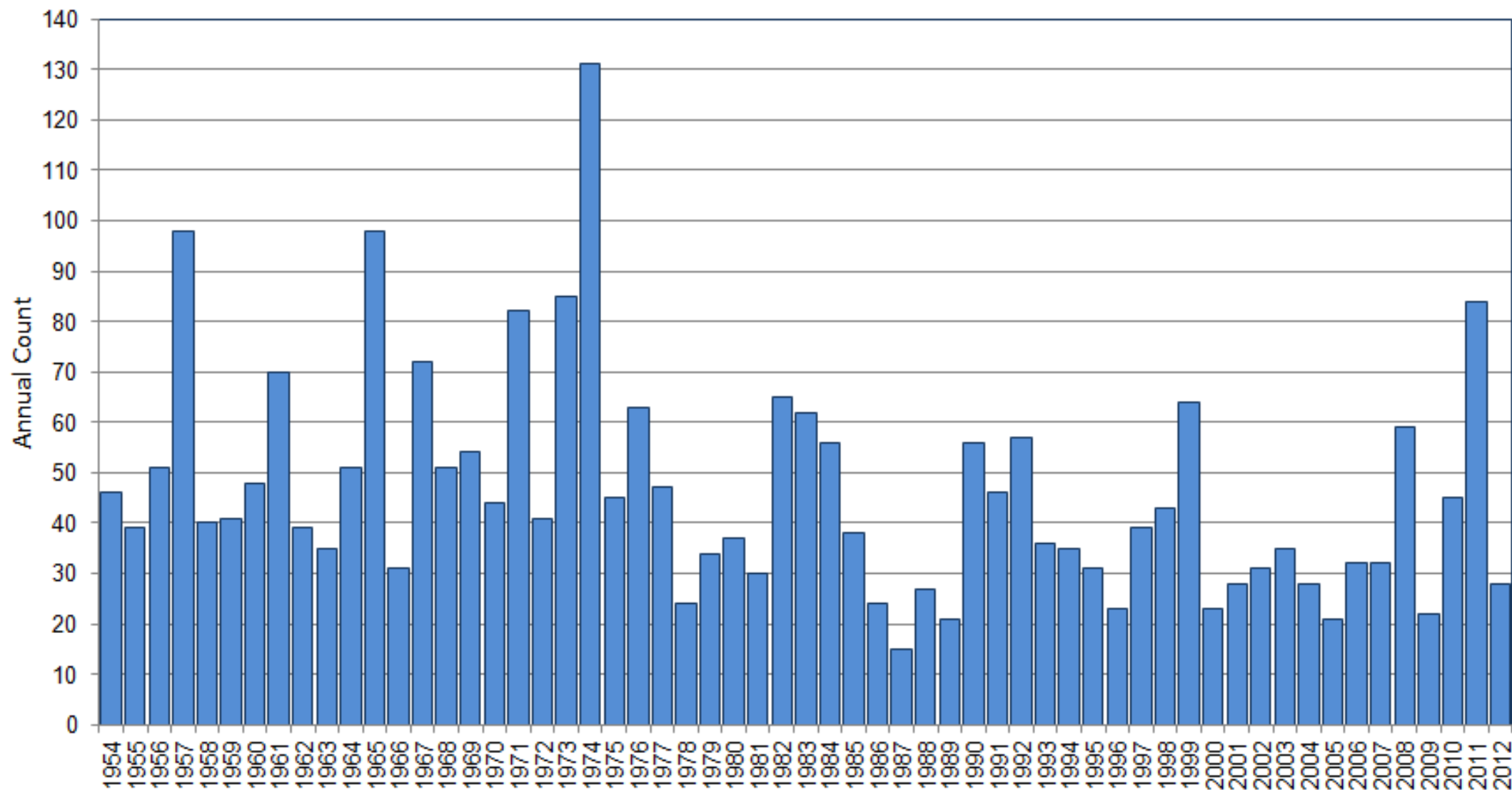




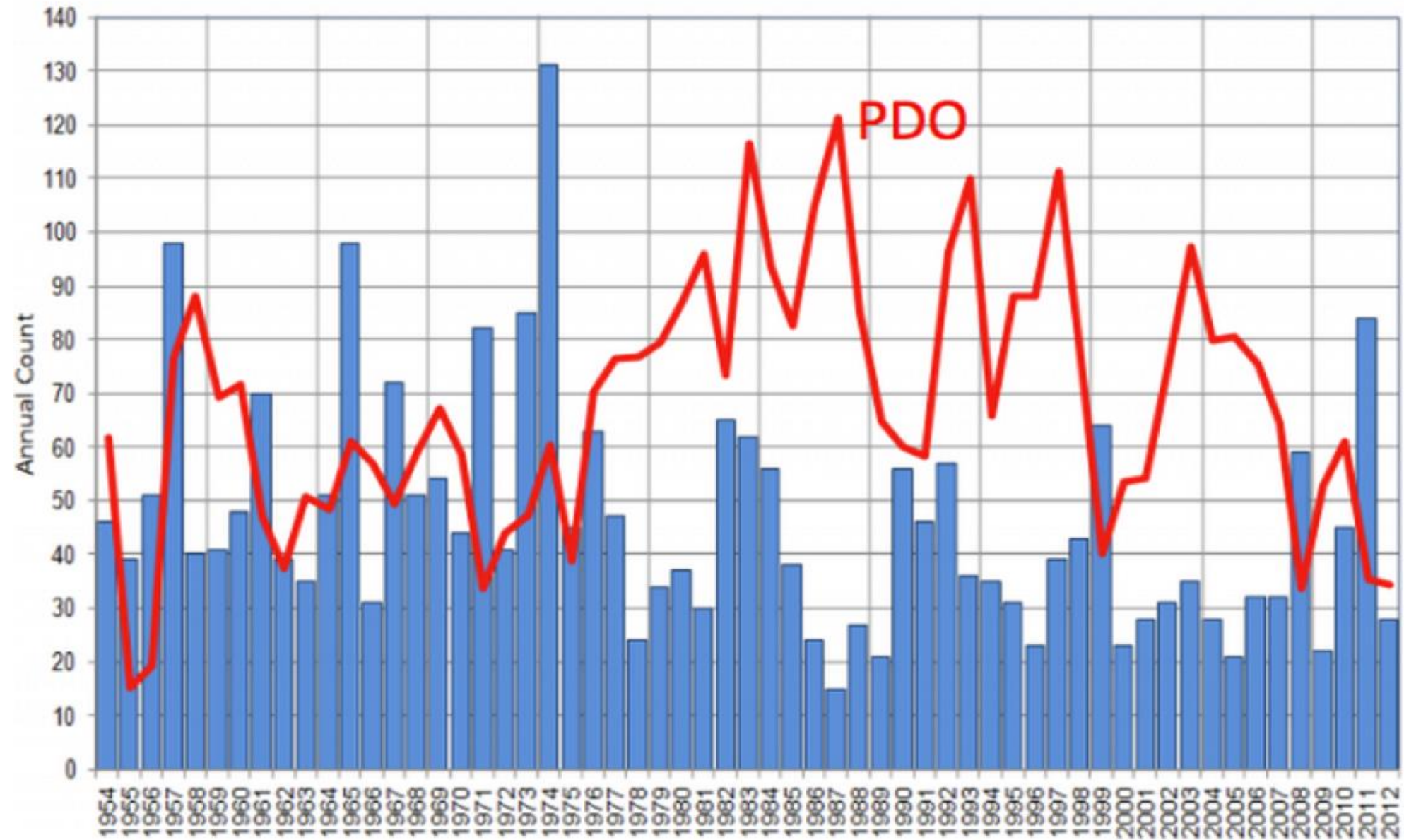
Extreme Weather Events

Tornadoes

U.S. Annual Count of Strong to Violent Tornadoes (F3+), 1954 through 2012



U.S. Annual Count of Strong to Violent Tornadoes (F3+), 1954 through 2012



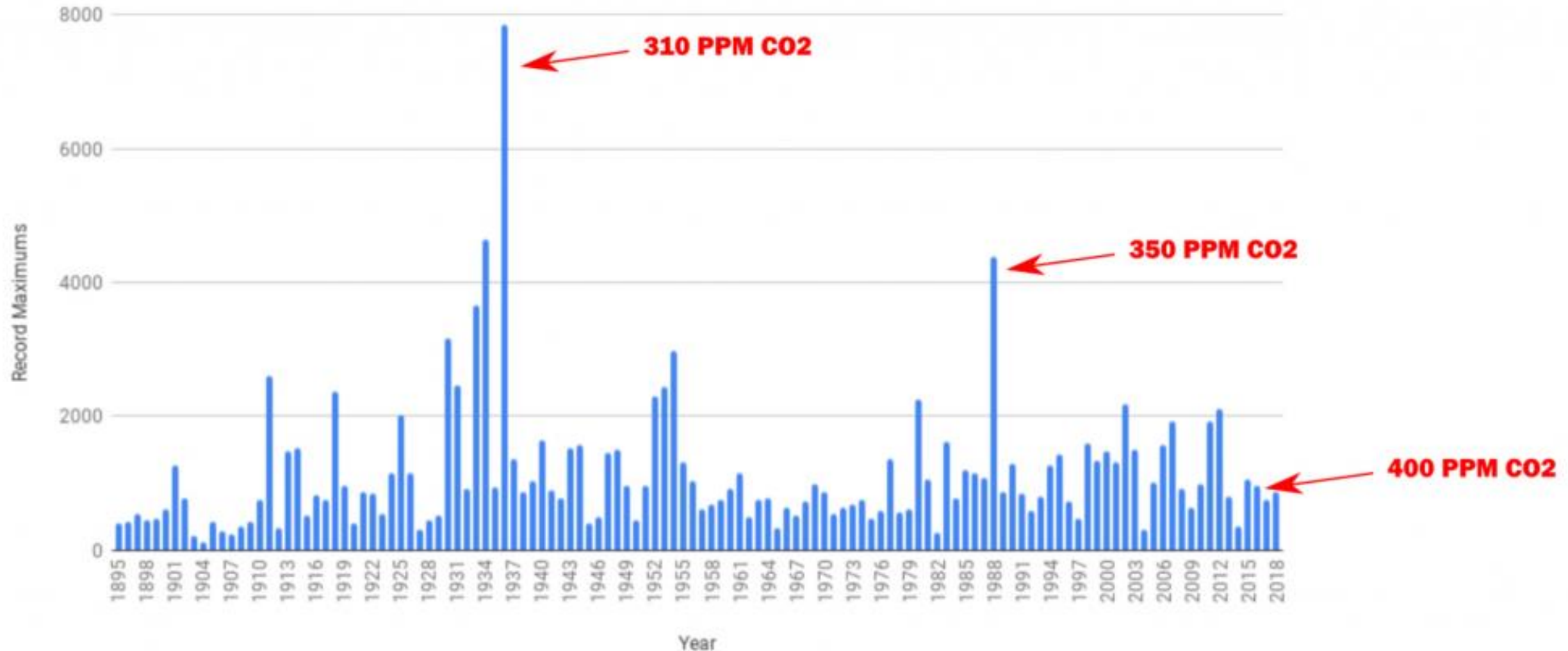
Executive Summary

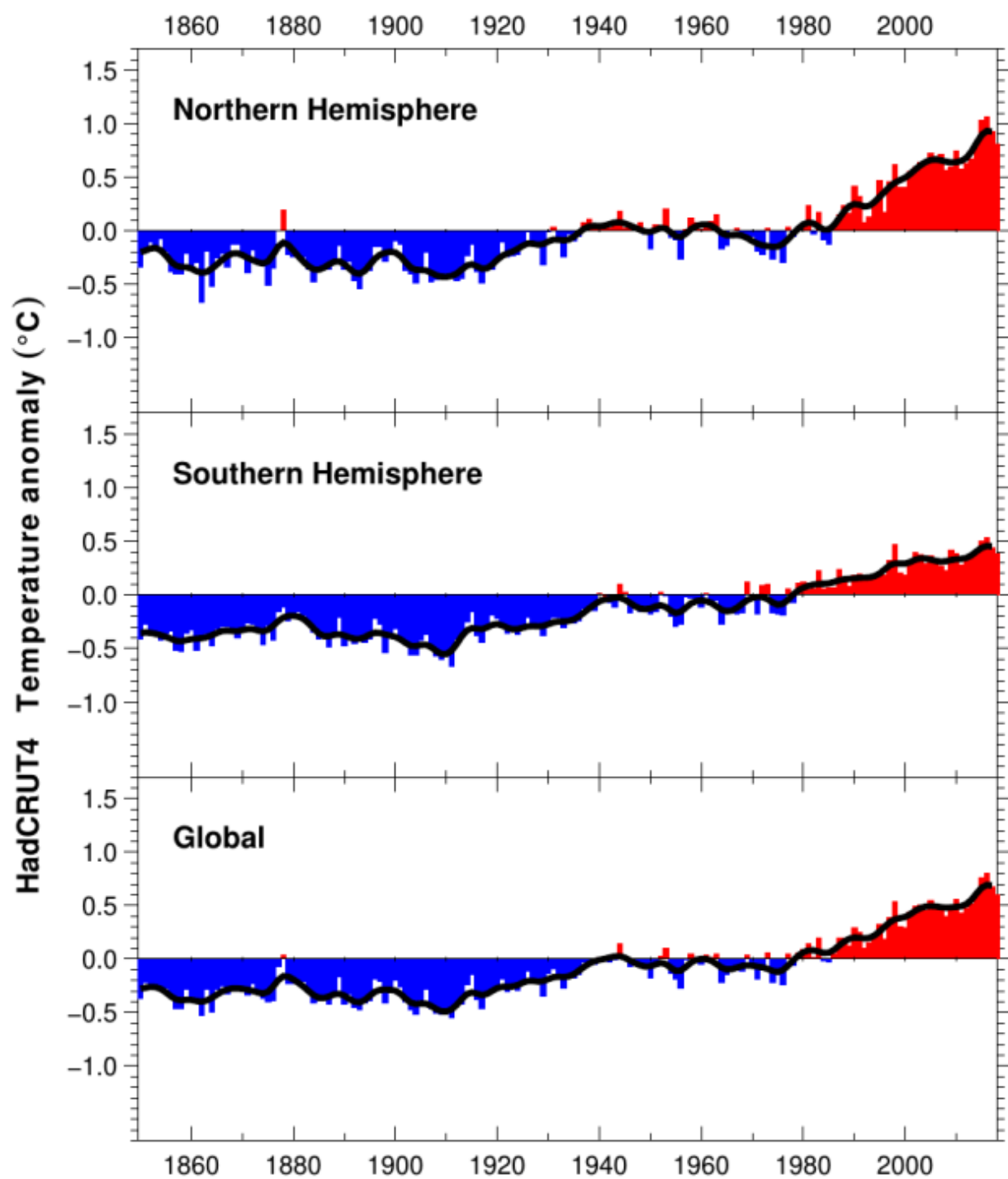
Special Report

Global annually averaged surface air temperature has increased by about 1.8°F (1.0°C) over the last 115 years (1901–2016). This period is now the warmest in the history of modern civilization. The last few years have also seen record-breaking, climate-related weather extremes, **and the last three years have been the warmest years on record for the globe.** These trends are expected to continue over climate timescales.

Number Of US All-Time Summer Record Daily Maximum Temperatures Set Or Tied

At All NOAA United States Historical Climatology Network Stations





<https://crudata.uea.ac.uk/cru/data/temperature/HadCRUT4.png>

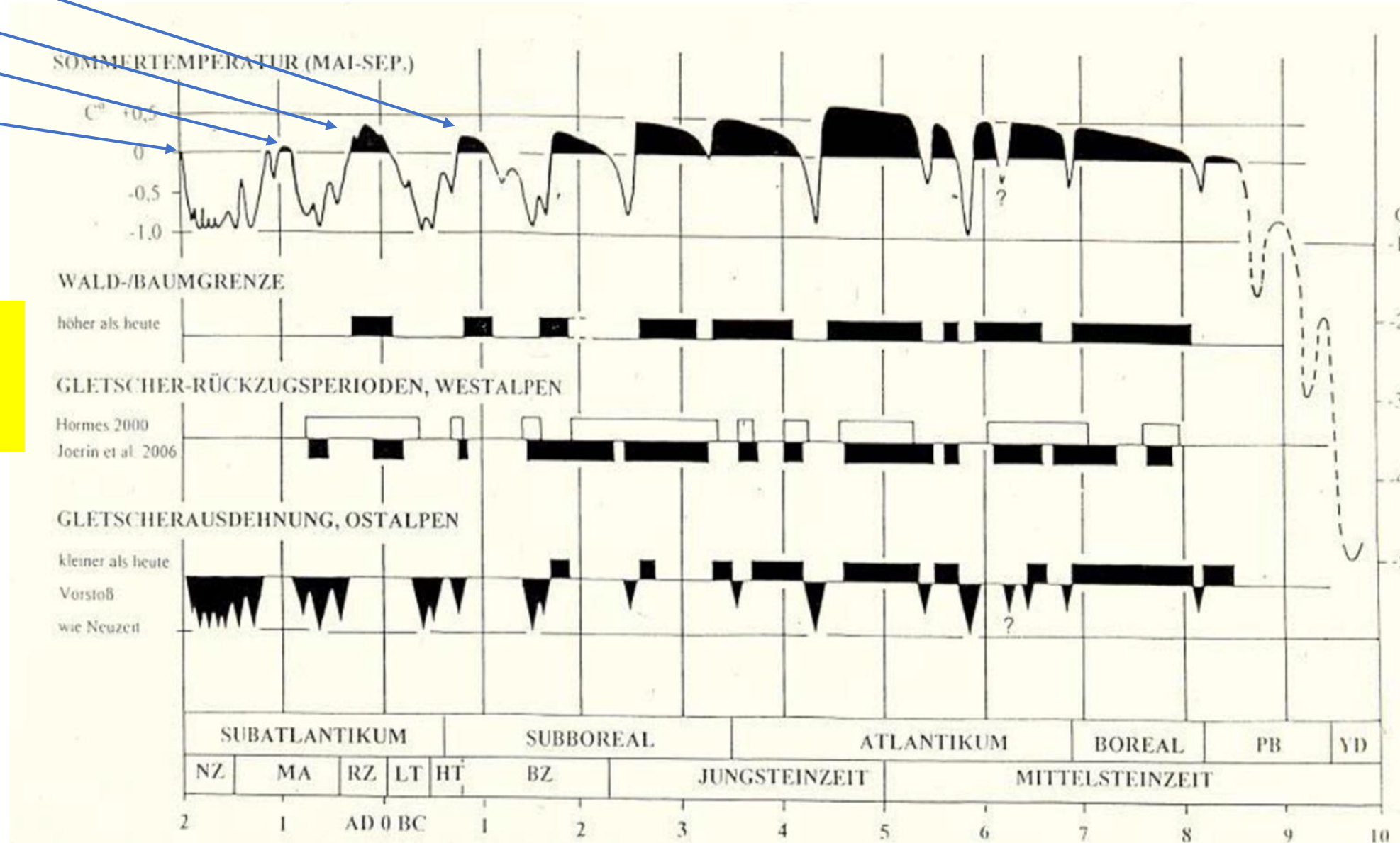
“and the last three years have been the warmest years on record for the globe”

“... and the last three years have been the warmest years on record for the globe.”

http://www.iuf-berlin.org/wm_files/wm_pdf/prof._patzelt_berlin_4.12.2009.pdf

Minoan
Roman
Medieval
Present

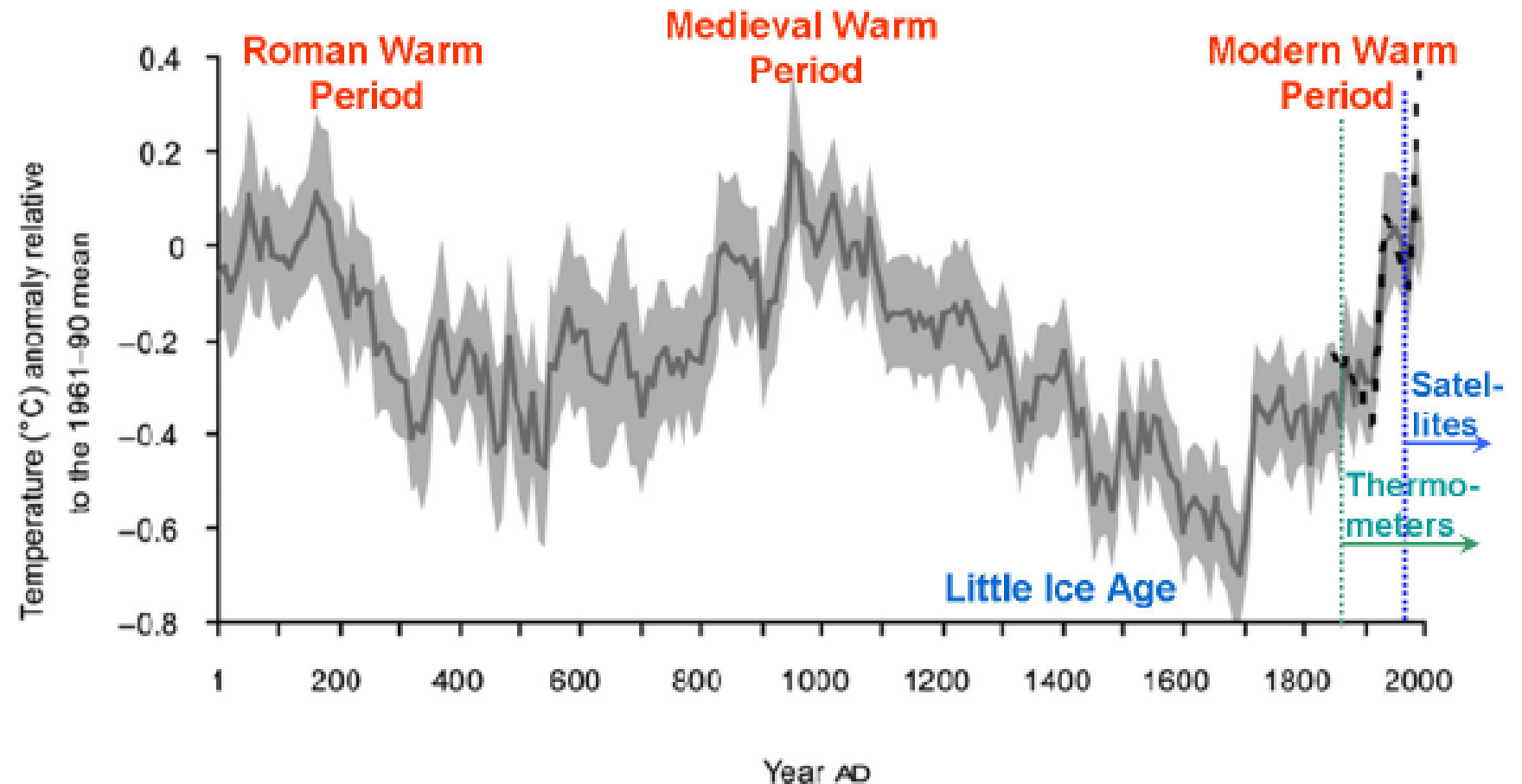
Maybe they were too
embarrassed to say
“Since the 1800s.”



“... and the last three years have been the warmest years on record for the globe.”

Maybe they were too embarrassed to say “Since the 1800s.”

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



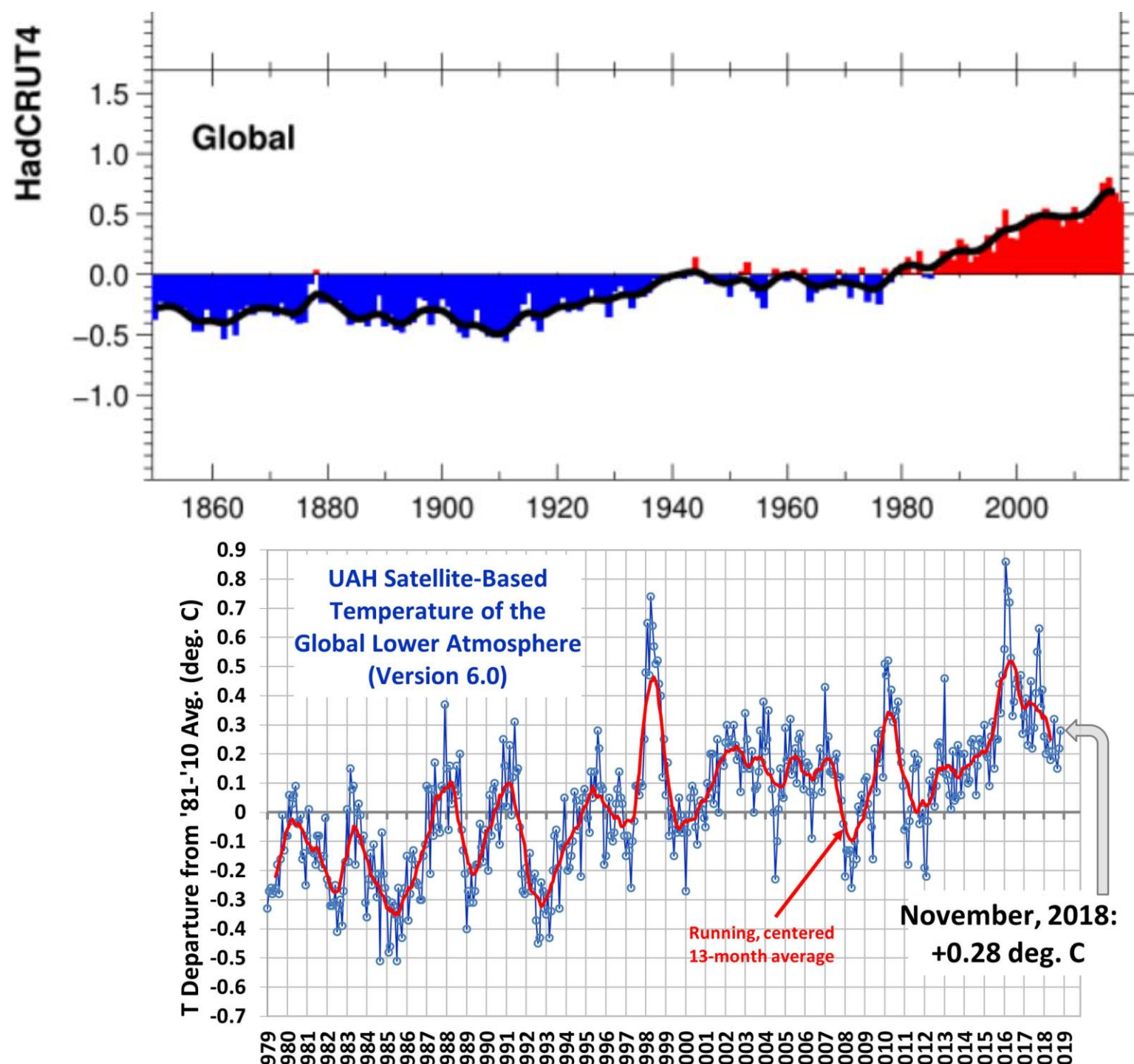
*Ljungqvist, F.C. 2010. A new reconstruction of temperature variability in the extra-tropical Northern Hemisphere during the last two millennia. *Geografiska Annaler: Physical Geography*, Vol. 92 A(3), pp. 339-351, September 2010. DOI: 10.1111/j.1468-0459.2010.00399.x

HADCRUT4 surface temperatures show ~1C rise since 1979, about twice what the greenhouse temperatures, the temperatures, measured by satellite, of the lower troposphere show.

Since the IPCC and NCA4 say it's greenhouse warming, what would account for the difference?

My hypothesis: the Urban Heat Island effect accounts for the difference.

Let's examine some UHI data...





Above, vehicle used to make numerous temperature traverses of Las Cruces, Feb 2013

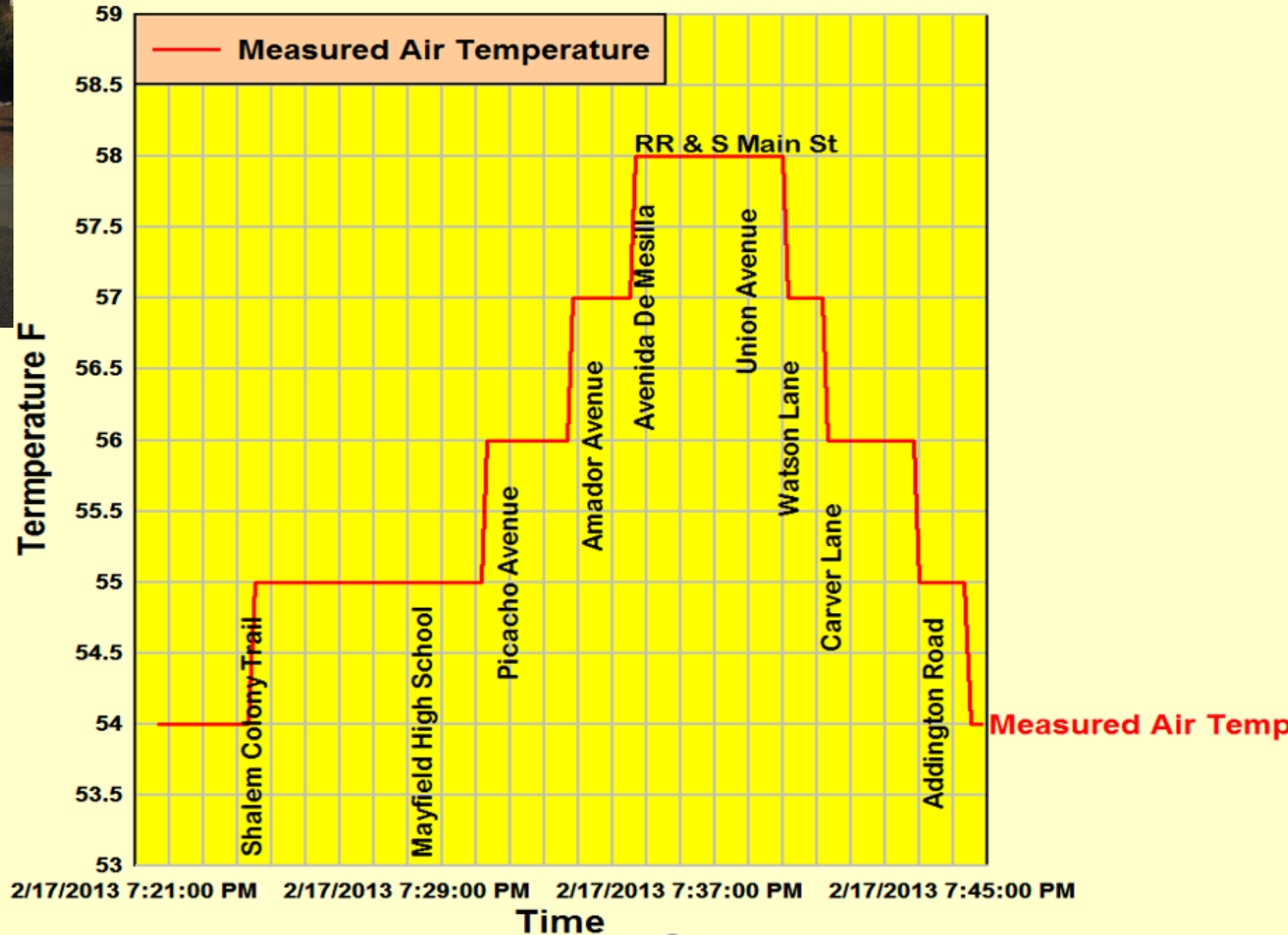
Right, traverse showing 4F or 2.2C urban heat Island.

The rise in (HADCRUT4) surface temperatures seems UHI-contaminated.

Where else is this seen?

Urban Heat Island Las Cruces, NM

17 Feb 2013

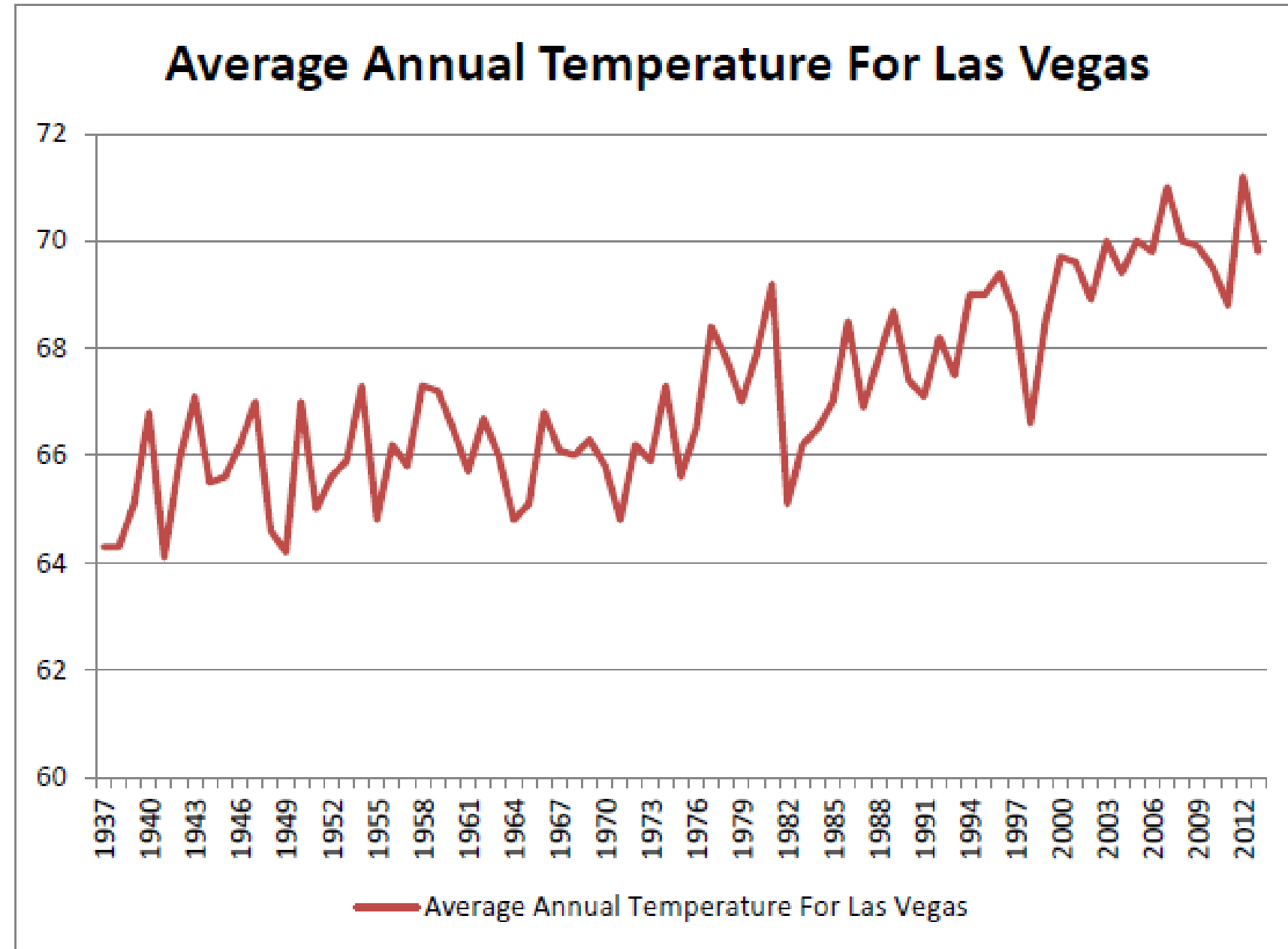


HADCRUT4 is the compilation of station average temperatures.

Average Station Temperature is calculated:

$$T(\text{avg}) = [T(\text{max}) + T(\text{min})] / 2$$

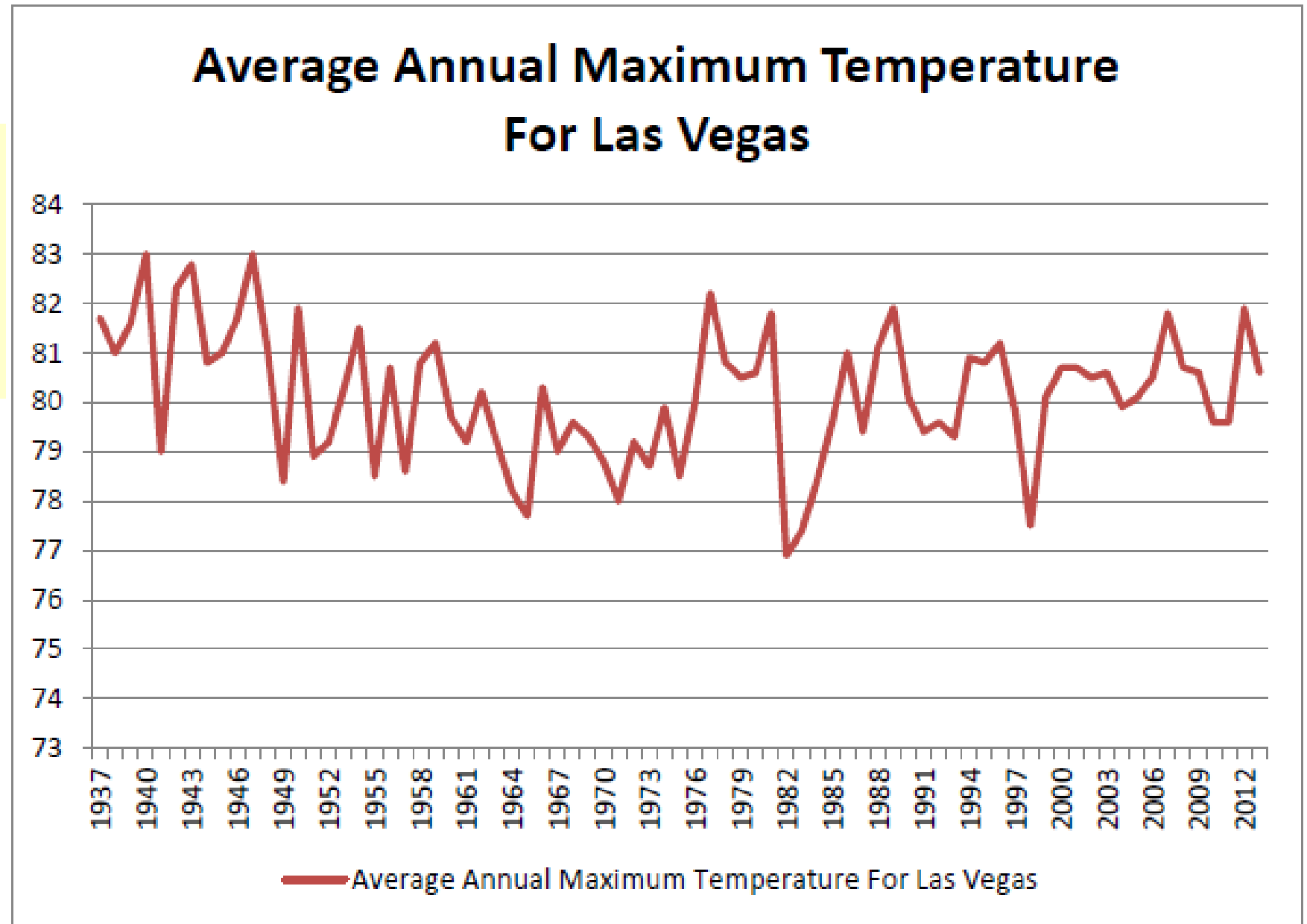
Let's see how this works.



Average annual temperature for Las Vegas since 1937 as noted by the red line.

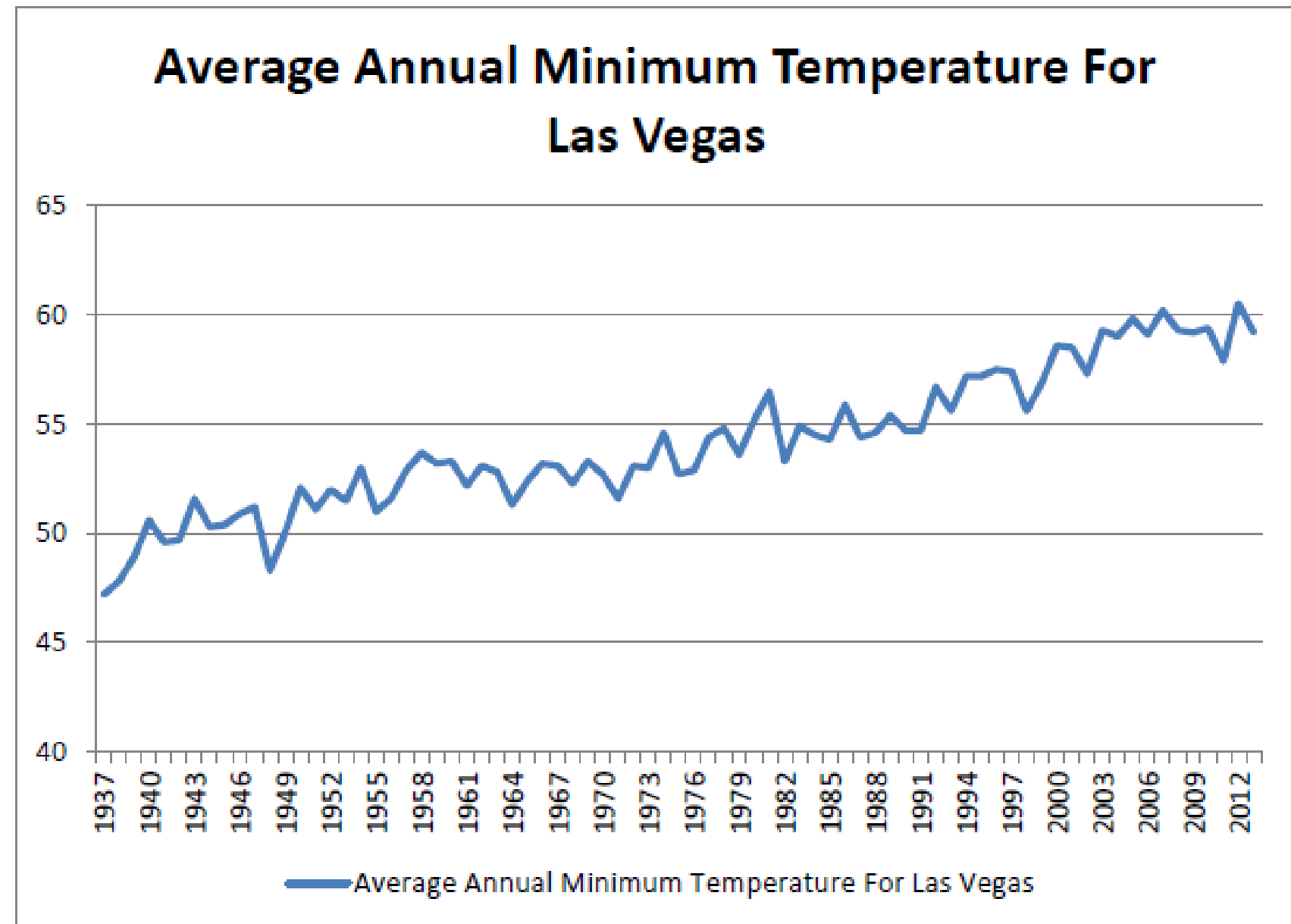
It is seen by inspection
that the maximum temperatures
might be decreasing a bit.

Maximum temperatures certainly
are not increasing.



Average Annual Maximum Temperature noted by the red line for Las Vegas since

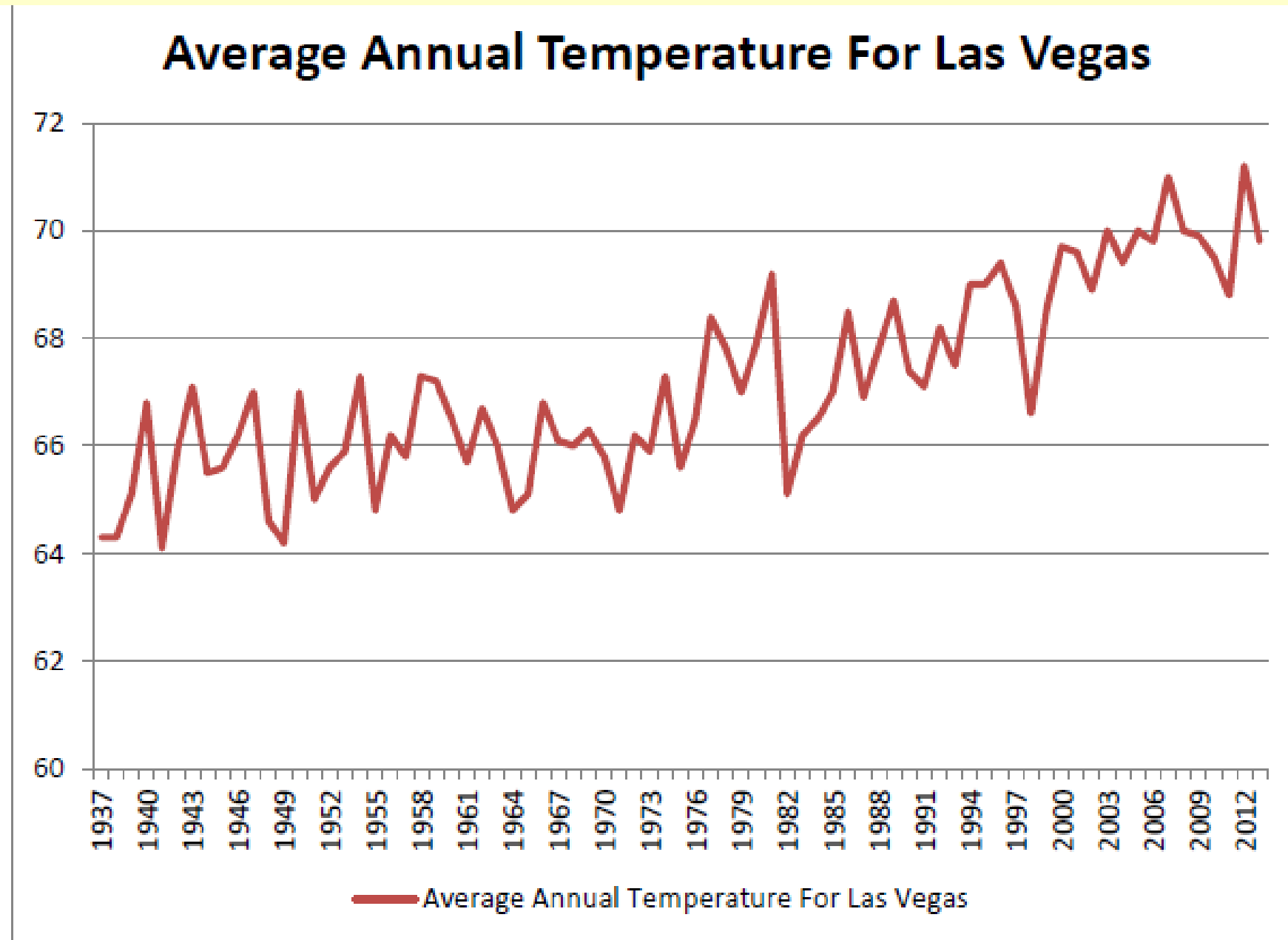
1937



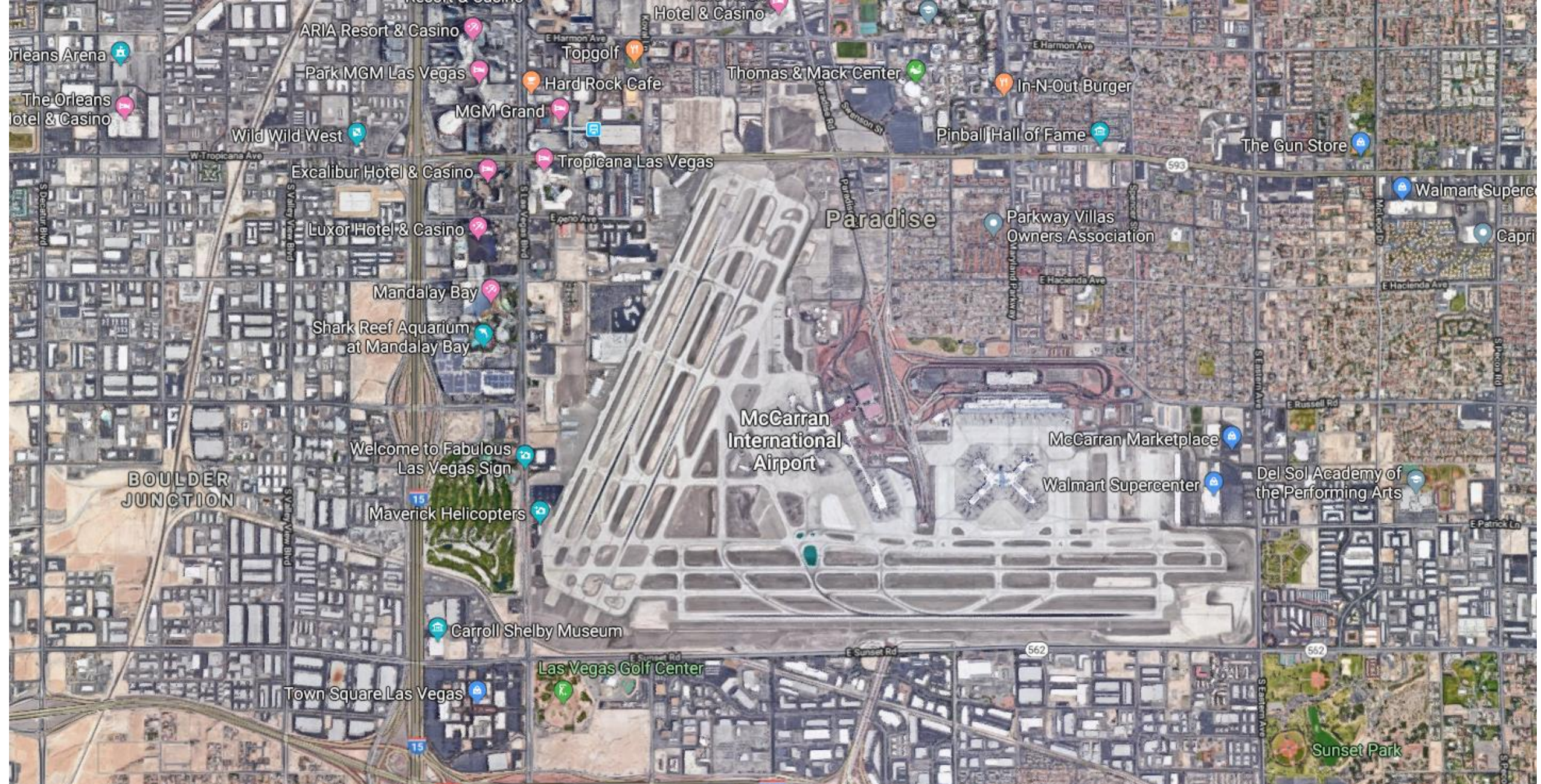
Average annual minimum temperature noted by the blue line for Las Vegas since 1937.

The reason Las Vegas' Temperature is increasing is because of increasing nighttime temperatures.

This is not an increasing < CO2> effect, it is because of population growth, causing a stronger Urban Heat Island.



Average annual temperature for Las Vegas since 1937 as noted by the red line.



Anyone visiting Las Vegas, Nevada might remember that McCarran International Airport is right on the Las Vegas Strip and probably close to the center of the Las Vegas Urban Heat Island

NOAA Temperature Classification Guide

Climate Reference Network Site information Handbook

<http://www1.ncdc.noaa.gov/pub/data/uscrn/documentation/program/X030FullDocumentD0.pdf>

2.2.1 Classification for Temperature

**Class 1 – Flat and horizontal ground surrounded by a clear surface...
Sensors located at least 100 meters from artificial heating or reflecting surfaces, such as buildings, concrete surfaces, and parking lots.**

Class 2 – Same as Class 1 with the following differences. .. Artificial heating sources within 30m...

Class 3 (error $\geq 1^{\circ}$ C) – Same as Class 2, except no artificial heating sources within 10 meters.

Class 4 (error $\geq 2^{\circ}$ C) – Artificial heating sources within 10 meters.

Class 5 (error $\geq 5^{\circ}$ C) – Temperature sensor located next to/above an artificial heating source, such a building, roof top, parking lot, or concrete surface.

Analysis of USHCN Station Visits

Most USHCN stations do not meet NOAA'S own established standards.

11%, of stations meet the standards, a SMALL minority

20% of USHCN stations have >1C error

58% of USHCN Stations have >2C error

11% of USHCH Stations have >5C error

Is the US Surface Temperature record reliable when most stations have $\geq 2C$ Error?

USHCN - Station Site Quality by Rating

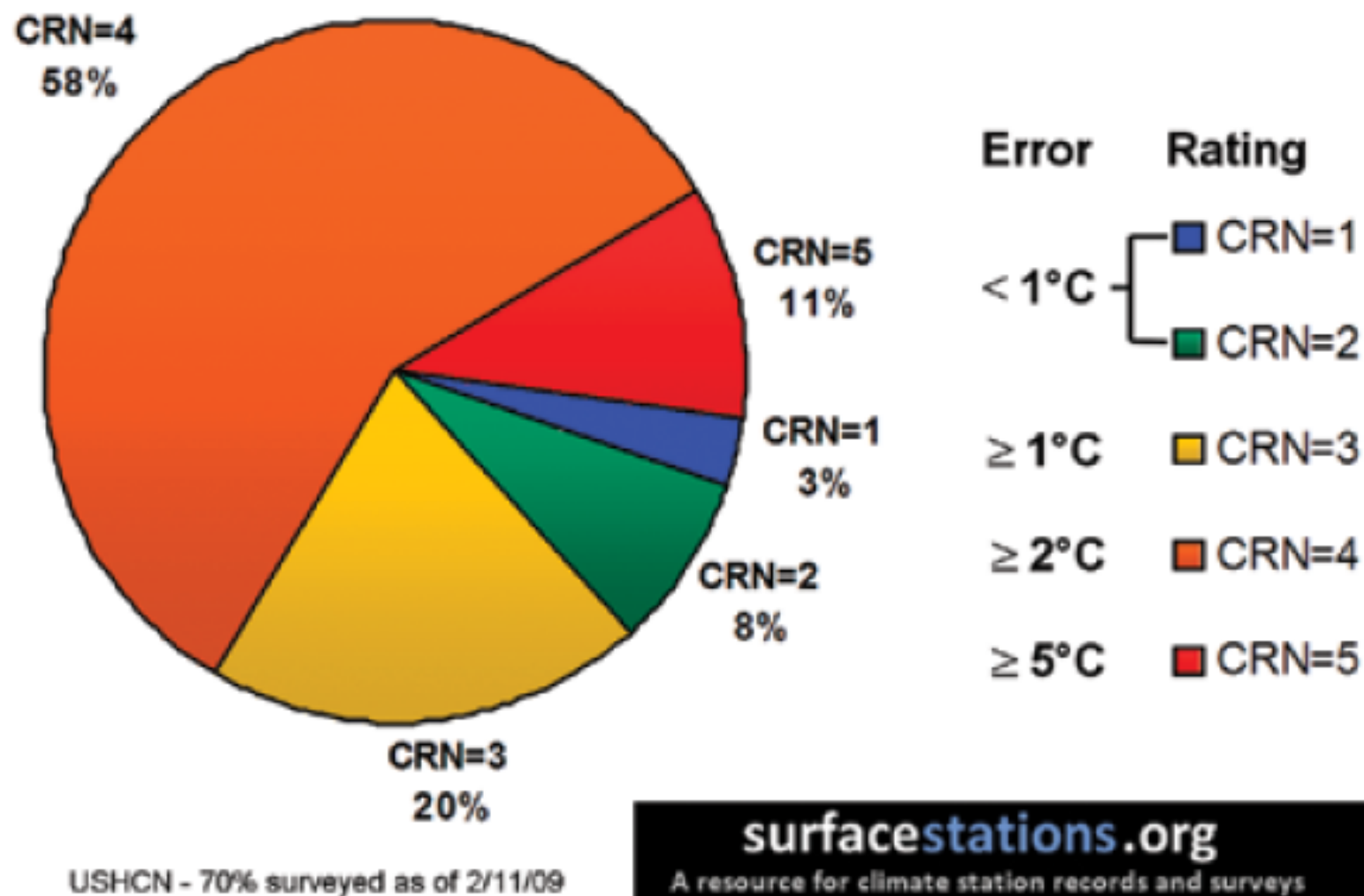


Figure 27. Most of the surveyed temperature stations in the U.S. fall into categories that mean they are unreliable. Only stations in CRN=1 and CRN=2 – 11 percent of all stations – are reliable.

New study shows half of the global warming in the USA is artificial

Anthony Watts / July 29, 2012

PRESS RELEASE – U.S. Temperature trends show a spurious doubling due to NOAA station siting problems and post measurement adjustments.

Chico, CA July 29th, 2012 – 12 PM PDT – FOR IMMEDIATE RELEASE

A comparison and summary of trends is shown from the paper. Acceptably placed thermometers away from common urban influences read much cooler nationwide:

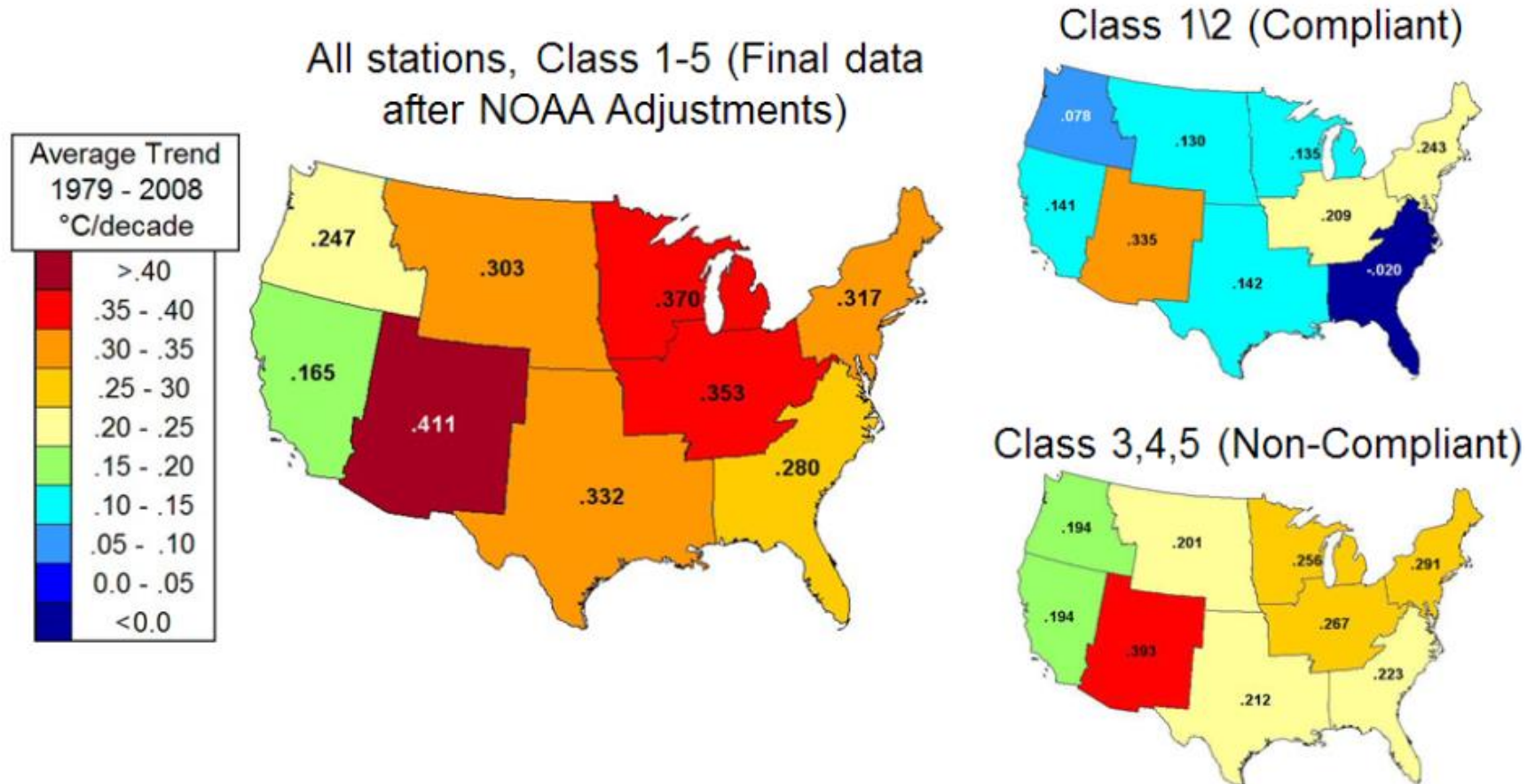
Comparison

All Rated Stations in the CONUS

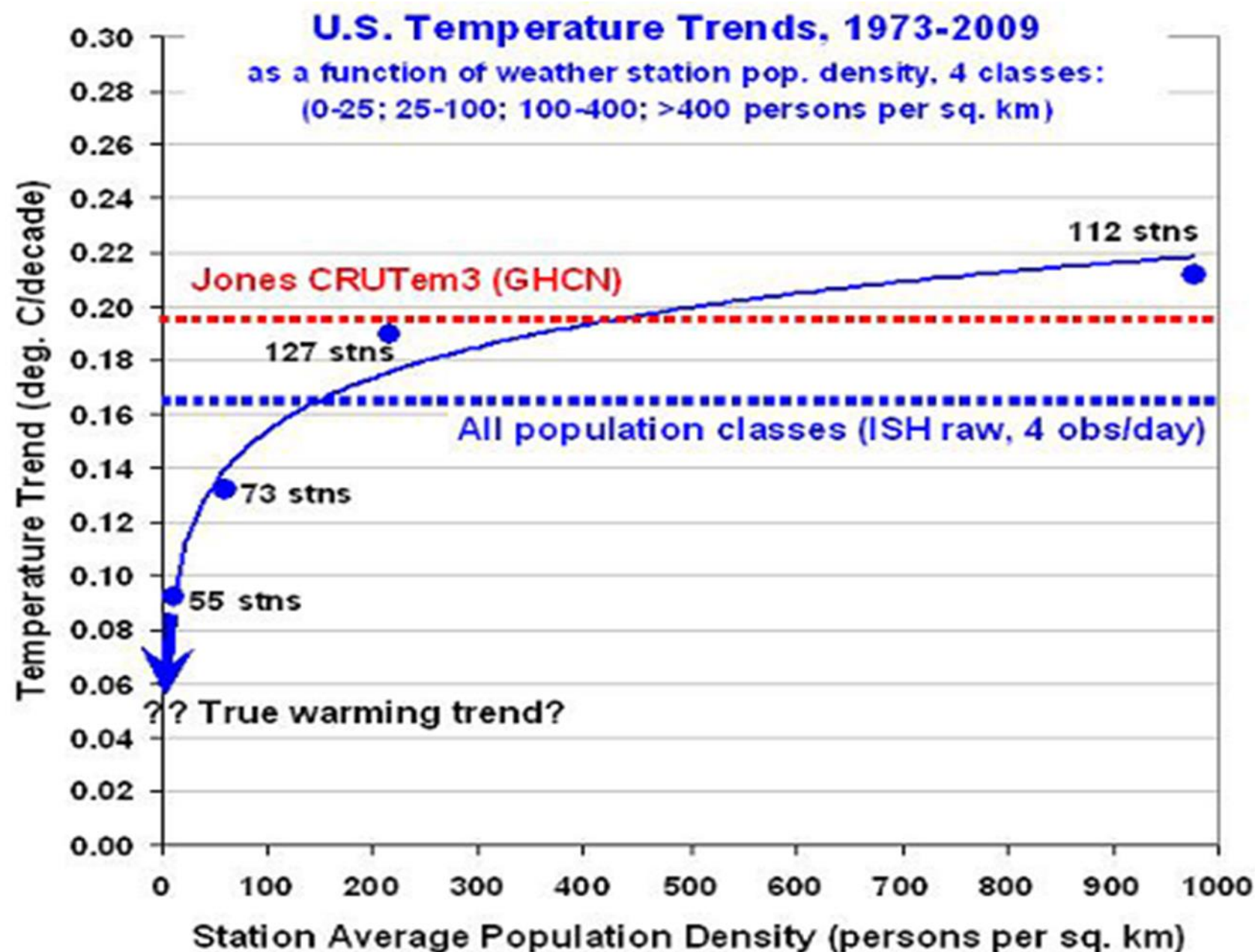
What the compliant thermometers (Class 1&2) say: **$+0.155^{\circ}\text{C/decade}$**

What the non-compliant thermometers (Class 3,4,5) say: **$+0.248^{\circ}\text{C/decade}$**

What the NOAA final adjusted data says: **$+0.309^{\circ}\text{C/decade}$**



**Direct evidence that most US Warming since 1973 could be spurious,
Dr Roy Spencer, Case Study 16, SPPI Original Report, "Surface Based Temperature Records... "**



The US General Accountability Office KNOWS that US Climatology data is full of errors

<http://www.gao.gov/products/GAO-11-800>



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CLIMATE MONITORING

NOAA Can Improve Management of the U.S. Historical Climatology Network

GAO-11-800, Aug 31, 2011

Highlights



[View Report \(PDF, 47 pages\)](#)

Executive Summary

Special Report

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Chapter Sections ▾

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Special Report

Do you believe the news? What in the news do you believe?

Questions to ponder, as the following graphics suggest

In 1934, Extreme Weather was not confined to the USA... as reported by the Los Angeles Times, 30 Dec 1934.

SUNDAY MORNING

Los Angeles Times

DECEMBER 30, 1934.—[PART I.] 13

Hand of Nature Falls Heavily on Whole World in Freak Weather Year of 1934

COLD, HEAT, DROUGHT AND FLOODS SET NEW MARKS

Unprecedented Extremes Recorded in Every Corner of the Earth; Even Climate Is Changed in Spots

The following account of the world-wide "freak weather" year of 1934 is based on the main upon an extensive survey made by the United Press at the suggestion and request of the Los Angeles Times and is composed in large part of copyrighted articles prepared by United Press staff writers in practically every country in the world—Editor Times.

As 1934 fades rapidly into its historical niche no keen retrospective insight is required to insure the accuracy of the statements that nothing has been so consistently in the public mind, created so much distressed thought or been responsible for so many economic upsets as the natural phenomena we call "weather."

Weather is usually "annual." In spite of the comparatively limited vocabulary used in its discussion, "heat, cold, rain, snow, wind, tide, clouds, flood, drought," there is, within these everyday use-words, a gamut which includes so many extremes that almost every human equation is affected.

The year just drawing to a close provided more "annual" weather than any similar period, since records have been kept. Not only locally, where "annual weather" is referred to in human fashion, but throughout the world the gods have gone berserk with the result that "annual" is being translated "freak."

1934. It predicted the 1934 drought and said that 1937 will bring the first considerable relief.

A FREAK YEAR

While there has been more cold, more heat, more drought, more floods and more of other extremes in 1934 all over the world than in any other year of record, it does not necessarily follow that averages will be materially disturbed. Climate disturbances are based on accurate observations taken over a term of years extending all the way from twenty years in some sections to 100 years in others and going back much farther than that as a less accurate basis.

The United Press has prepared an interesting and illuminating survey of world-wide weather conditions for the year from which much of the following data is derived.

The United States suffered the worst drought in a century during 1934 in a series of months by the weather man which marked the year as one of the most freakish in a generation.

The drought in the Middle West caused 3000 deaths and led to partial damage to live stock and crops which in cash ran into billions.



World Weather Map for 1934, Drawn by Charles E. Owens.

heat, drought, floods, hurricanes and destructive tides.

Only three of four cyclones raged in the vicinity of Cuba in 1934. Of these, the effects of only one were

undated. In South Africa, at Johannesburg, the Molepo River at Kalamien, which last carried water

Mountains near Bern in the early part of the year, but generally speaking the weather was especially

HOW SCIENCE ACCOUNTS FOR BERSERK ELEMENTS

Assigned Reasons Vary From Spots on the Sun to Concurrences of Meteorological Cycles

generally shorter duration have been noted chiefly. There has been a climatic decrease in the former torrential summer rains, and at the same time in the extreme south a reduction in the number and severity of frosts.

The freak summer followed a mild winter in 1934, which may have been caused by a change in the course of water masses circling the far, the experts say without a lack of the changes were due to earthquakes on the ocean floor, as reported recently, but are unable to explain the climate changes preceding meteorological years.

CHANGE IN CLIMATE

Meteorological officials said no serious theories had been advanced for this climate change, but that scientifically as far as has been found impossible to give any adequate reason. There are too few meteorological stations in the interior, for one thing, and collecting accurate data from large sections of Brazil as yet is impossible.

At the same time, experts declined to make any suggestions as how changes in the climate have might be related with weather phenomena in other parts of the world. It was noted, however, that even in the Andes Mountains and in countries on the Pacific coast of South America, floods, blizzards and exceptional weather conditions occurred in 1934 which escaped Brazil completely.

Chile—Not even the "winter is-hakatan" could remember such dry periods as the weather man played in Chile in 1934. Meteorologists issued their own books into the fire and decided no theory could hold good against such happenings.

On January 18, the terrible heat of a record summer melted the last block of a glacier disappeared in the snow, behind Tupungato Mountain, some 20,000 feet up in the Andes, and let loose a flood of water that

NO FAULT OF FOX

Additional losses were reported by the railways because rodents found no particular reason for leaving cool well equipped homes to rough it in sheds in the Japan Alps or at the southern, Russia, extension heat companies, makers of pineapples and all suffered.

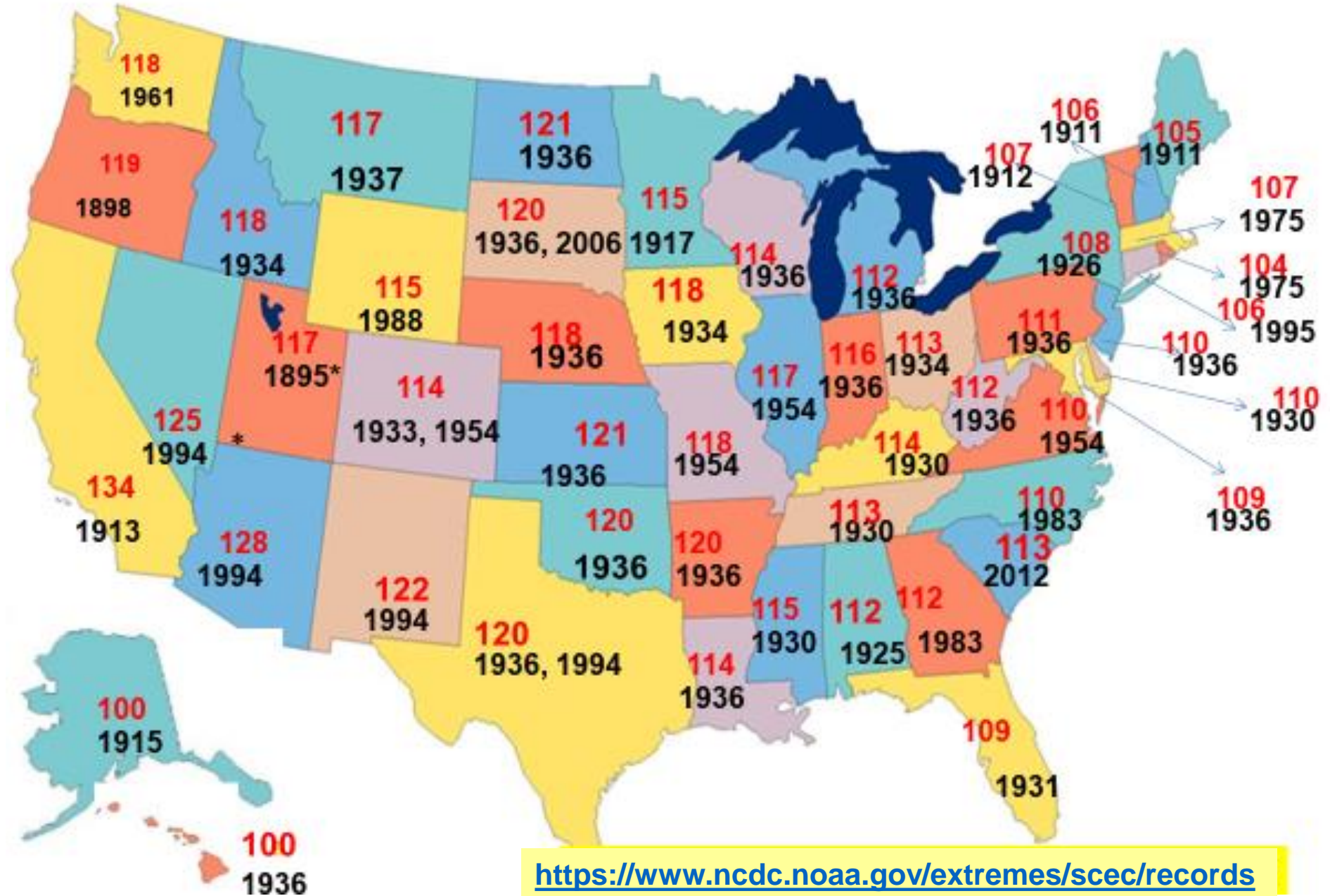
The drought in the south was not attended by unusual heat. However, the mountain streams in the south dried up and crises along the inland sea reduced their water. Men went west to the more favored climates. Then in September it rained in the south, precipitation slackened in the north.

Not a Tokyo southwest said he had talked to a fox personally and the fox said it was just one of those things.

The population in general survey with the fox as the cause of the year in the weather bureau.

In China, annual floods of the Yellow River and the Yangtze caused widespread damage, killing scores of lives. The dust storms of Peiping and vicinity caused extraordinary discomfort, although the

US. Record Maximum Temperature F by State and Year



<https://www.ncdc.noaa.gov/extremes/scec/records>

Extreme maximum temperature for each of the fifty states (plotted in red) and the year in which that extreme maximum was set (plotted in black)

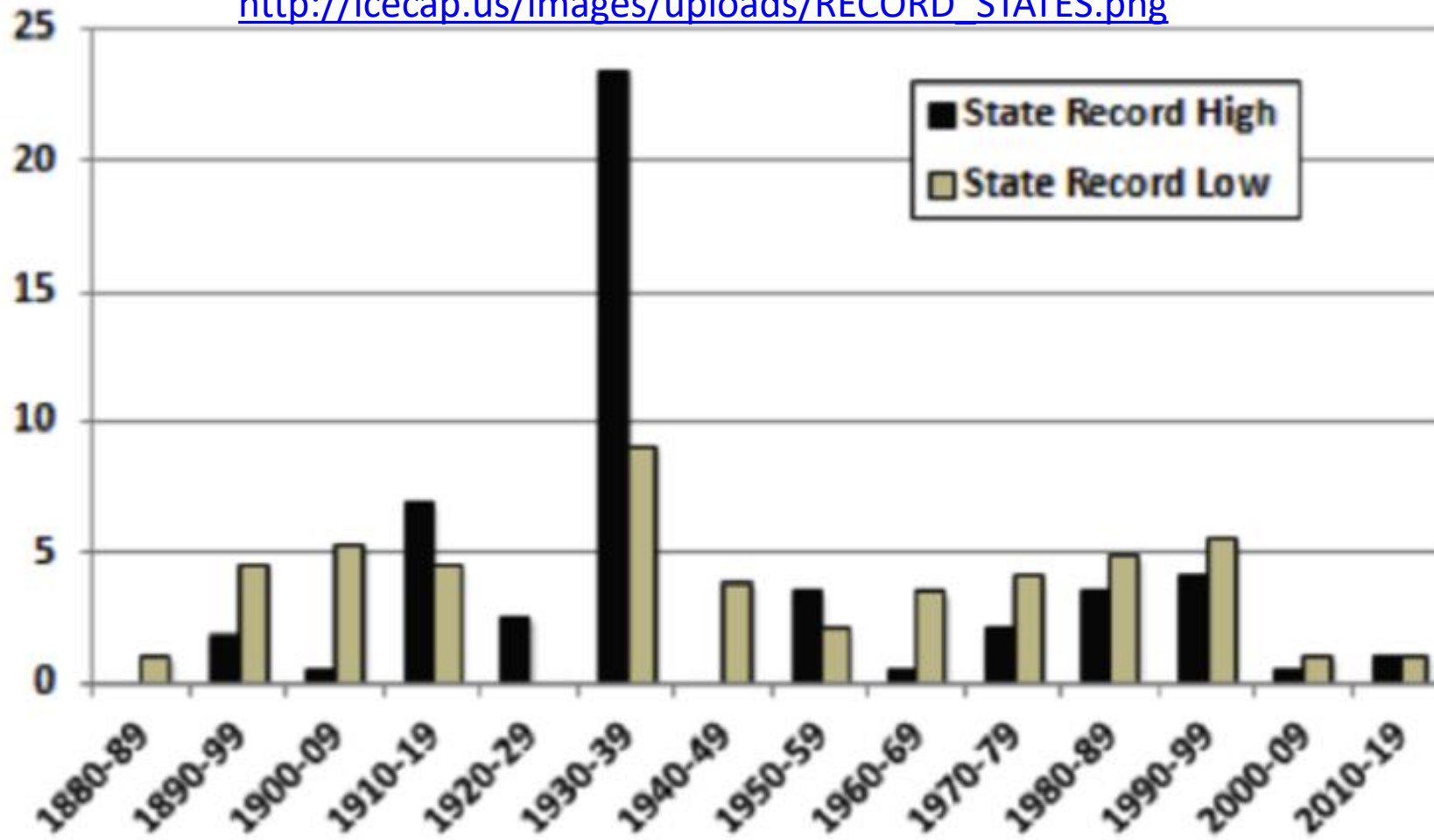
Twenty-eight of the fifty states' extreme maxima were set in the 1930s or before.

The data disagree with the theory of CO₂-fueled warming.

Next graphic shows this on a temporal basis.

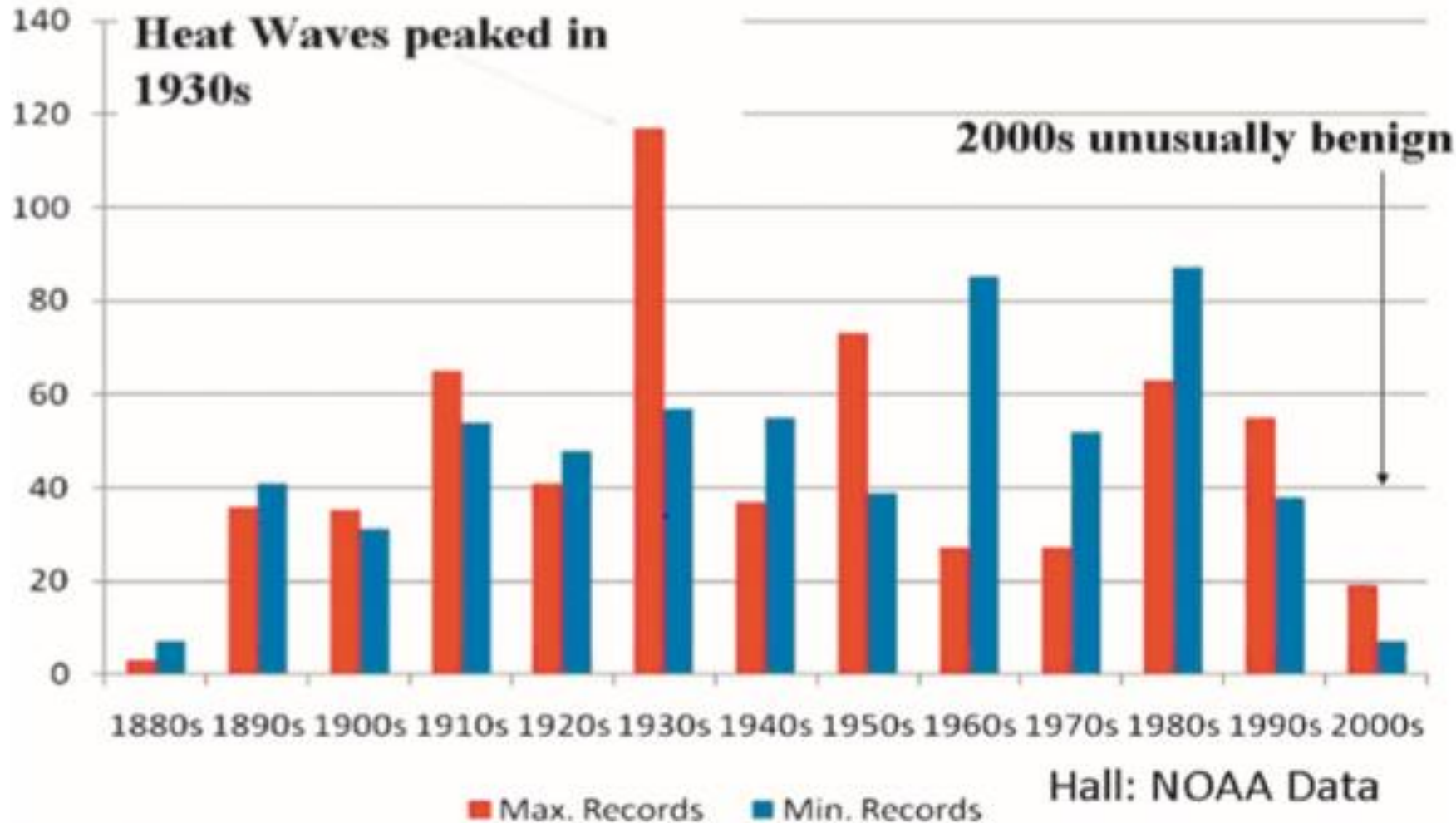
Number of State Record High & Low Temperatures by Decade

http://icecap.us/images/uploads/RECORD_STATES.png



U.S. State Maximum and Minimum Monthly Records by Decade

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



This graphic, similar to the NOAA Extremes data base referenced earlier, directly confounds and contradicts the notion emphasized in NCA4 that increasing <CO₂> is leading to increasingly warmer temperatures.

NB peak in the 1930s, when <CO₂> was ~307 PPM.

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

The Chicago Tribune

14 July 1936

100 dead in Detroit

Durand, MI, 112F,
record still stands.

Chicago Tribune July 14, 1936

SIX TORRID DAYS TAKE HEAVY TOLL OF DETROIT LIVES

[Chicago Tribune Press Service.]
(Pictures on back page.)

Detroit, Mich., July 13.—[Special.]—City hospitals and the Wayne county morgue today presented a picture seen only during a major catastrophe as Detroit endured its sixth consecutive day of 100 degree weather—the worst heat wave in the history of Michigan.

Nurses and physicians worked overtime in hospitals crowded beyond capacity with hundreds of heat prostration patients. At the county morgue, where 100 bodies were received during the day, women and children wept as they moved among the crypts seeking to identify loved ones.

Chicago Tribune July 14, 1936

Other Cities Set Record.

Other Michigan cities registered higher temperatures than Detroit. Durand set an all time state high with 112. It was 111 at Saginaw, for a record, 108 at Grand Rapids, and 107 at Kalamazoo. At Adrian, Jackson, and Grand Rapids it was 106. Owosso reported 105, Battle Creek, 103, and Muskegon 101.

At Marquette in the Upper peninsula the mercury went to 104.

The Bend Bulletin

Bend, Oregon

Saturday, 25 July 1936

Over 12,000 US residents died of the heat in a single week,

What might the press reaction today be today if 12,000 US residents died from the heat in a single week?

THE BEND BULLETIN

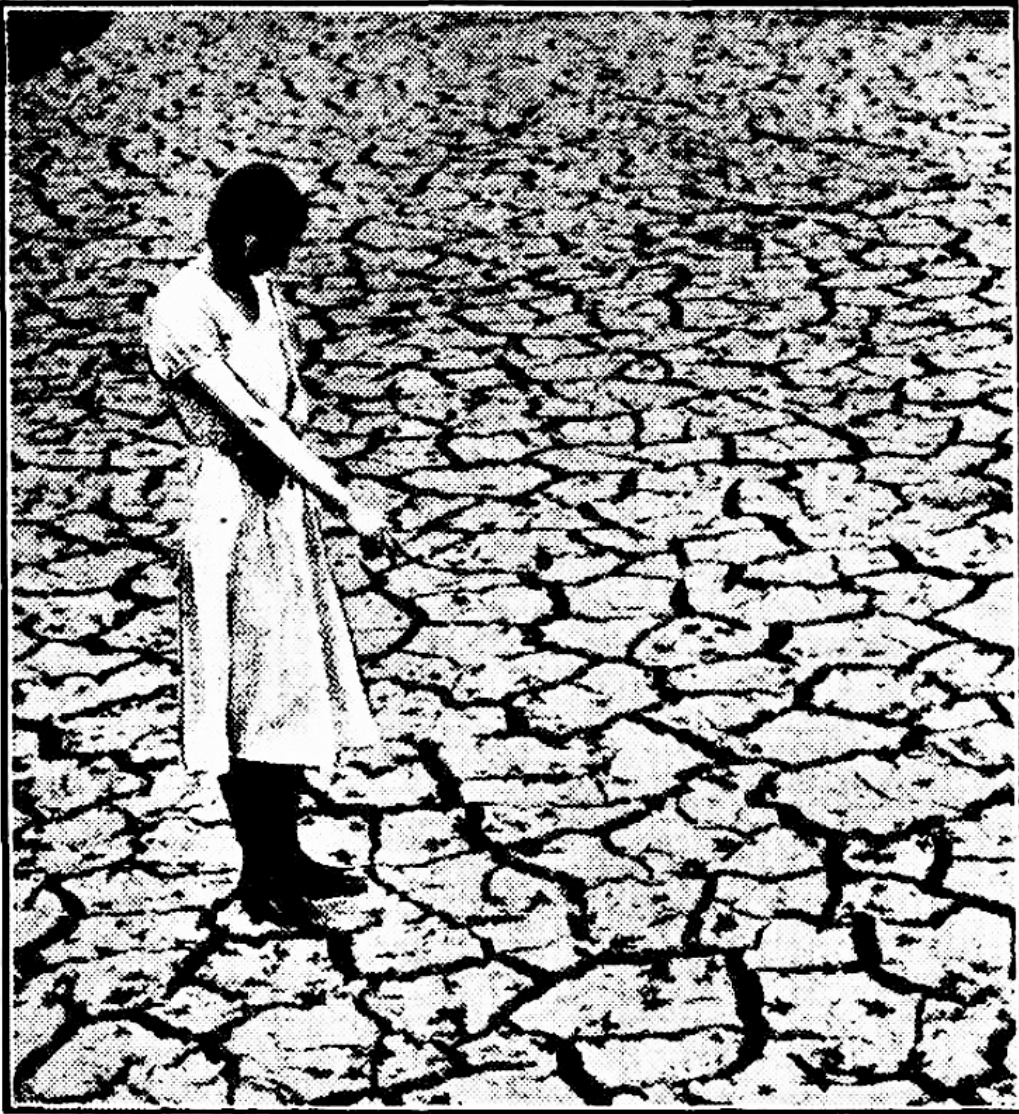
SATURDAY AFTERNOON, JULY 25, 1936

**Heat Wave Toll
Over 12,000 in
86 Cities in Week**

Washington, July 25 (UP)—The first official figures on the death toll of last week's heat wave indicated today that literally thousands of lives were lost in the temperatures of 100 degrees and higher throughout a large part of the nation.

The census bureau released mortality statistics today for the week ending July 18 showing 3332 more deaths in 86 cities

DROUGHT IN ENGLAND.



England has just experienced the worst drought for nearly 100 years. Above is seen a network of cracks in the dry bed of one of the Tring reservoirs in Hertfordshire.

The Manchester Guardian

Saturday, 12 May 1934

THE MANCHESTER GUARDIAN, SATURDAY, MAY 12, 1934

NEW YORK DARKENED BY VAST DUST-CLOUD

Freak Weather in United States

HEAT-WAVE AND DROUGHT HIT
THE FARMERS

High Temperatures in Britain

Connecticut's Hartford Courant

Friday, 22 June 1934.

World-Wide Drought Is Seen Likely

Weather Man Admits
There Is Something
Wrong and That No
One Knows Why

BY JOSEPH B. KINCER.
(Chief Meteorologist, U. S. Weather
Bureau.)

Washington, June 21.—(NANA.)—
“What is wrong with the world’s
weather?” is a question I have been
asked many times in the last few
weeks. It is much simpler to describe
what is happening than to try to
tell why. For the truth is that no
one knows why.
It is quite possible that the entire
world is headed for a dry period.

WORLD DROUGHT

Farmers' Ruinous Losses

Almost Universal Disaster

Europe Revives Pagan Rites

LONDON, June 2.

A survey of the threat of a world drought reveals ruinous losses by farmers in many parts of the world. There is an actual shortage of food, with young crops blasted in the ground by the scorching sunshine and thousands of cattle without pasture. The disaster is felt from the Mississippi, in the United States, to the Volga, in Russia, from the Yugoslavian valleys to the Western Canadian prairies. The following reports were received in London today:

from the Yugoslavian valleys to the Western Canadian prairies. The following reports were received in London today:

From Belgrade: Three months of drought and terrific heat have caused a revival of ancient pagan rain-making rites in many parts of South-Eastern Europe. Gipsies decked with green boughs are dancing and singing prayers to the rain gods, and girls, dressed only in green leaves, danced and sang in the streets, and then ceremoniously flung their garlands into neighbouring streams. Two youths at Dragovatz suddenly seized a priest, who was praying for rain, and hurled him into the water to appease the pagan river god. Various other forms of magic were utilised, but the over-generous gods sent heavy hail in Bosnia, destroying the crops, remaining after the drought. Even where rain has prevented a famine, it is too late to restore reasonable crops.

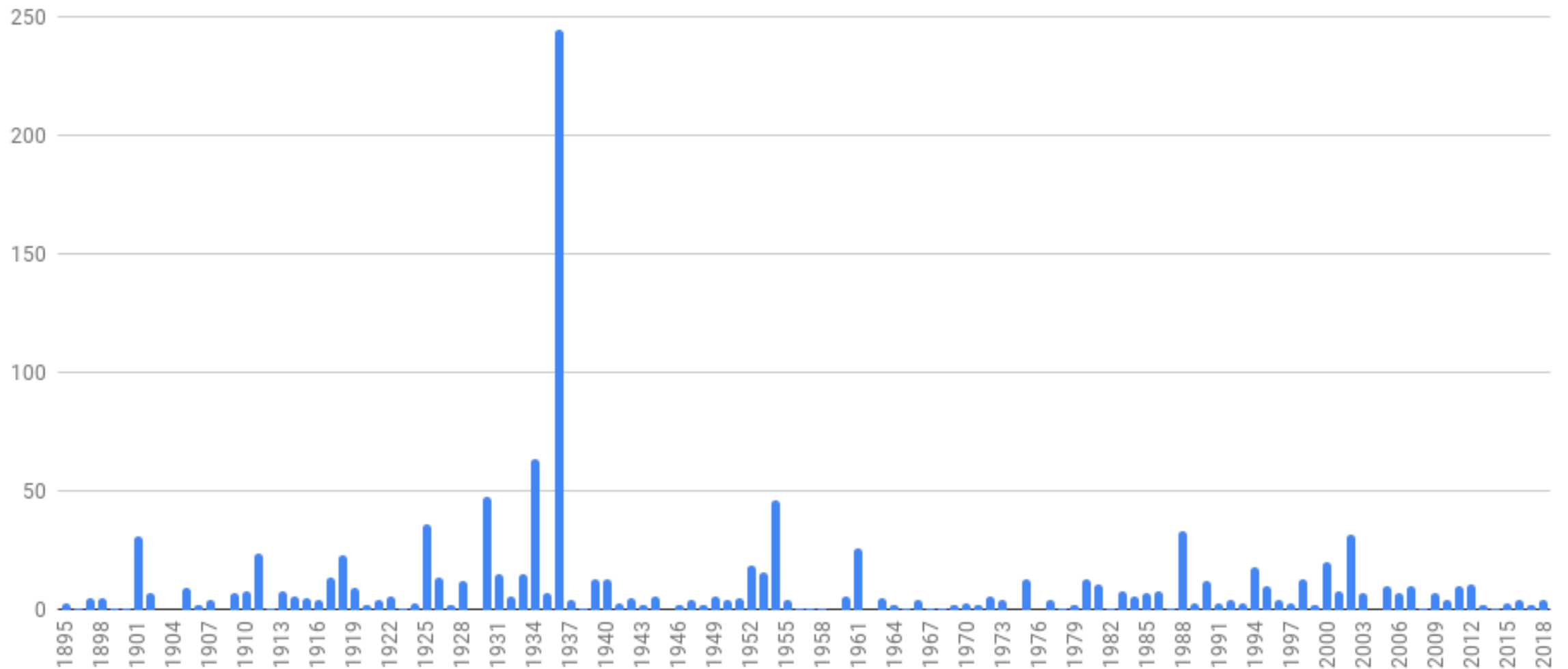
Executive Summary

Special Report

Global annually averaged surface air temperature has increased by about 1.8°F (1.0°C) over the last 115 years (1901–2016). **This period is now the warmest in the history of modern civilization.** The last few years have also seen record-breaking, climate-related weather extremes, and the last three years have been the warmest years on record for the globe. These trends are expected to continue over climate timescales.

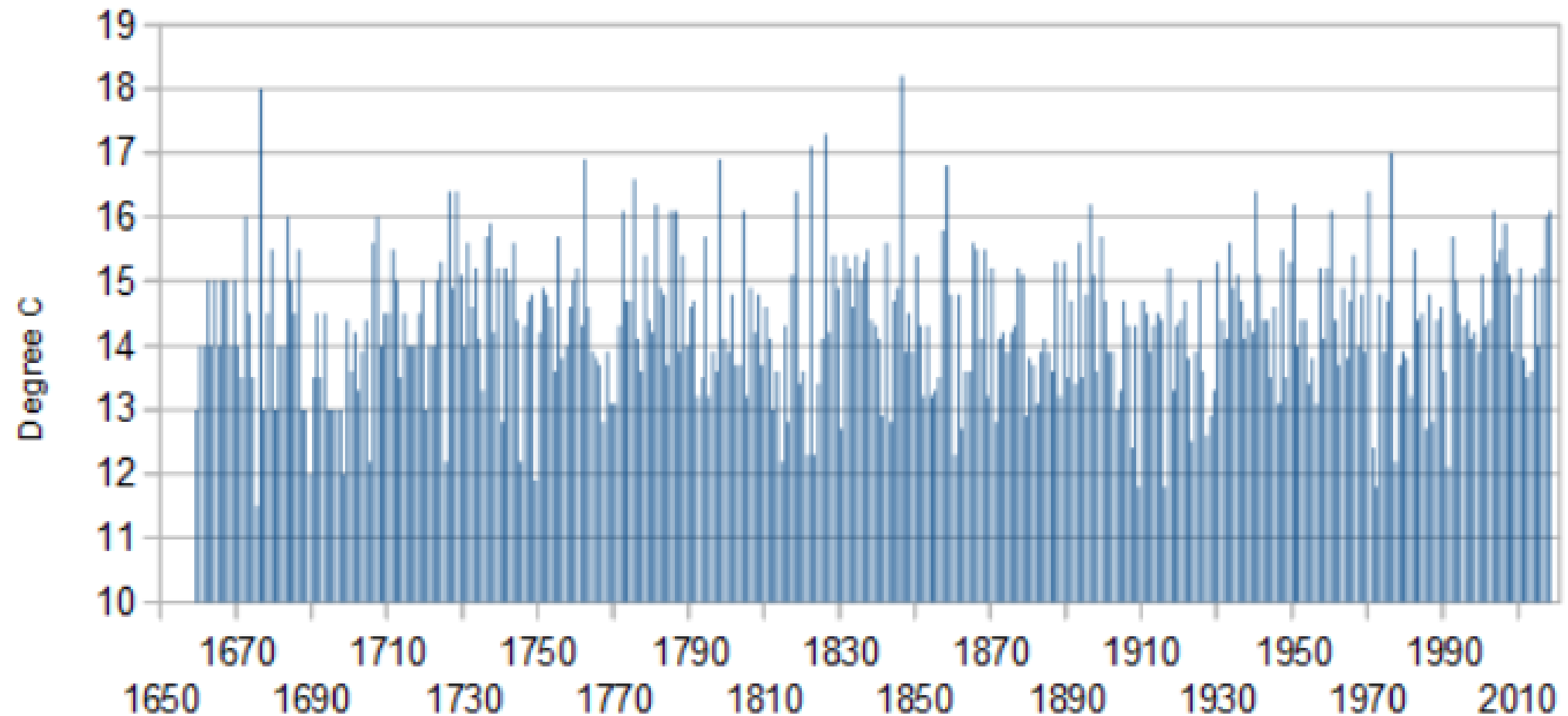
Number Of All-Time US Record Maximum Temperatures Set Or Tied

At All 1,218 US Historical Climatology Network Stations



CET Mean Temperature - June

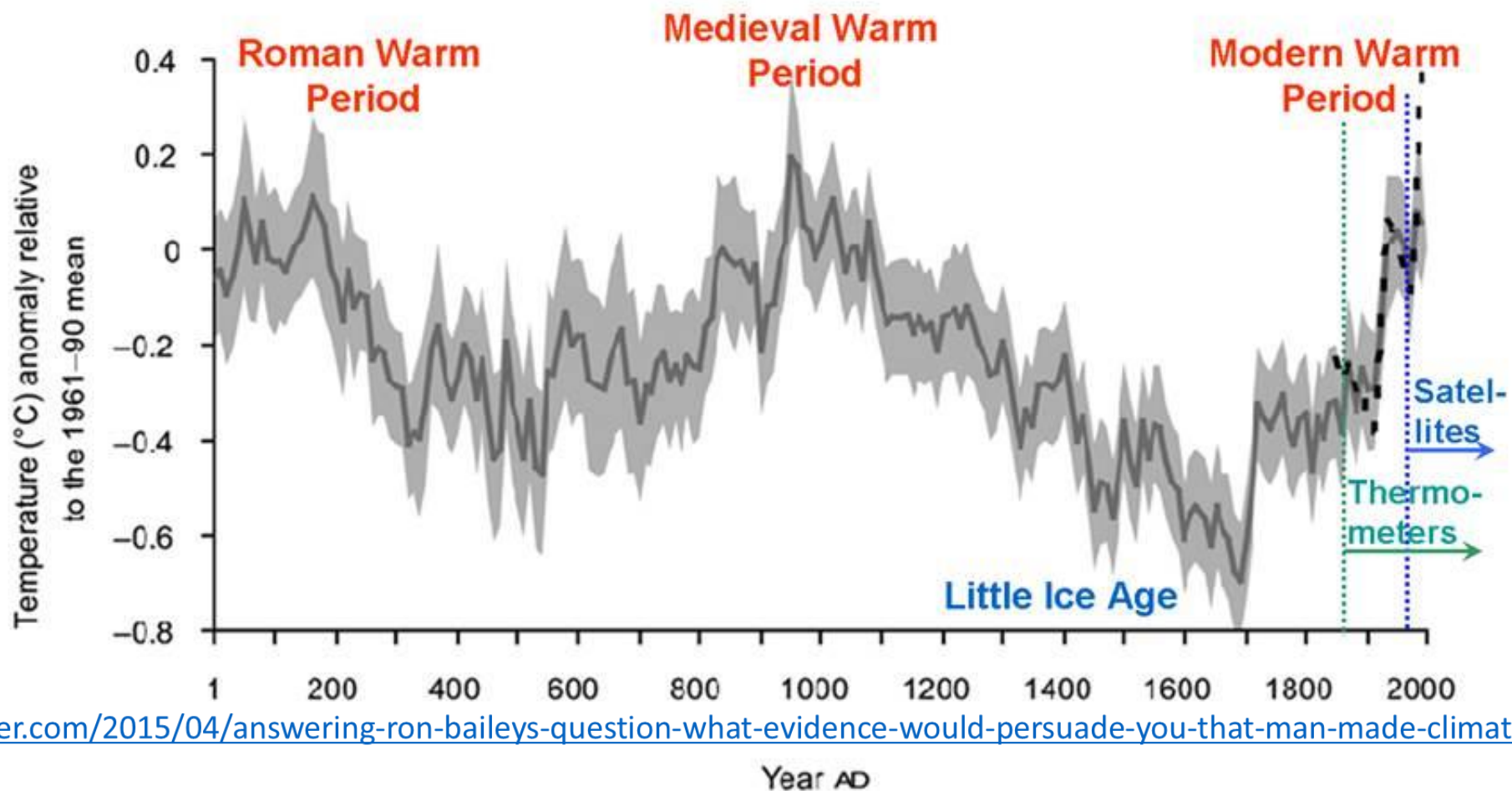
1659 to 2018



Nearly Every Century Experiences Global Warming or Cooling

Temperature Reconstruction* for N. Hemisphere, 1 - 2000 AD

Shows Modern Warm Period Not Exceptional



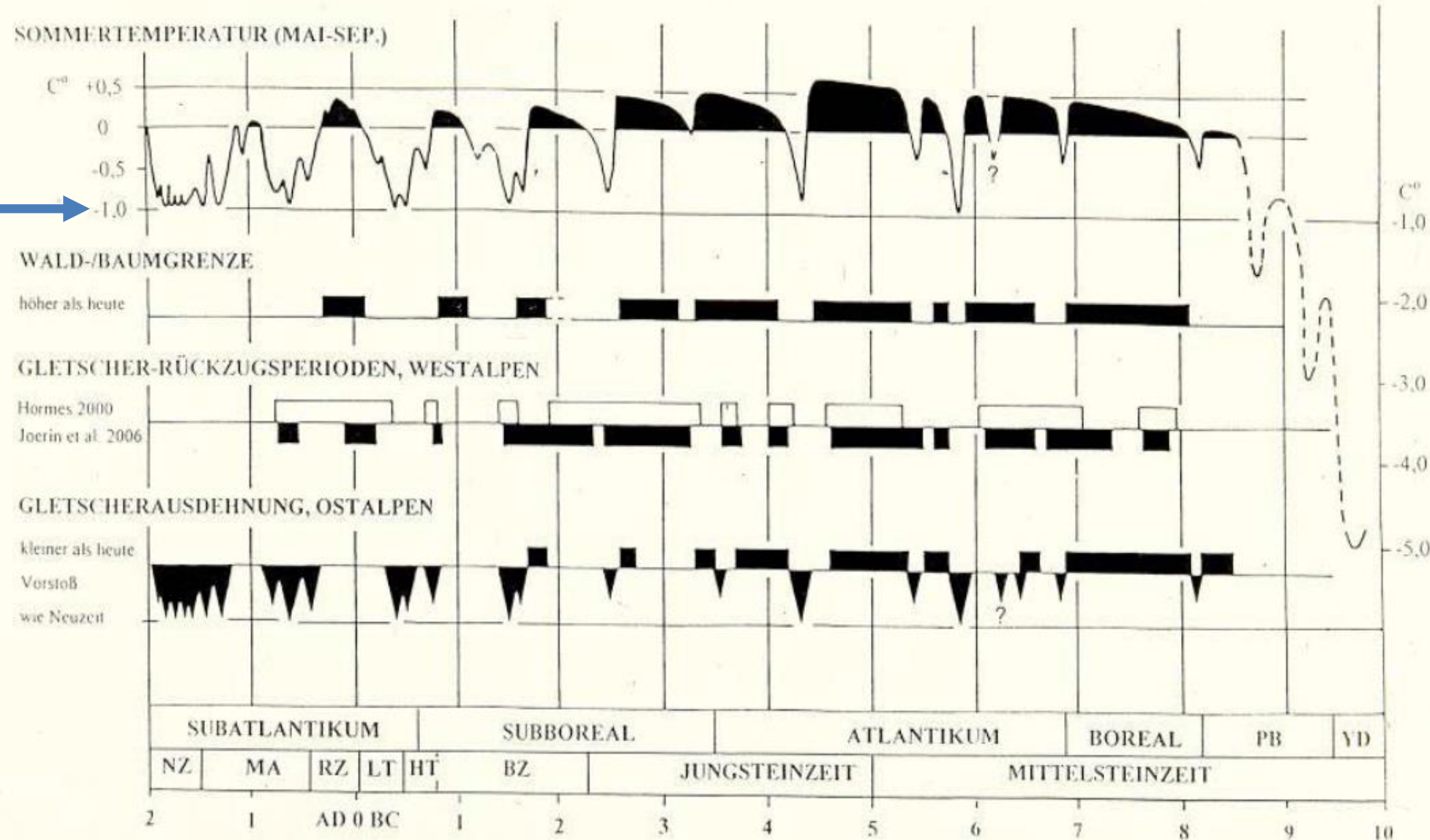
<http://www.drroyspencer.com/2015/04/answering-ron-baileys-question-what-evidence-would-persuade-you-that-man-made-climate-change-is-real/>

*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

Glaciers as Climate Witness, Gletscher als Klimazeugen

http://www.iuf-berlin.org/wm_files/wm_pdf/prof._patzelt_berlin_4.12.2009.pdf

Summer Temperatures,
May to September



Global warming pause 'central' to IPCC climate report

By Matt McGrath
Environment correspondent, BBC News

🕒 23 September 2013 | Science & Environment

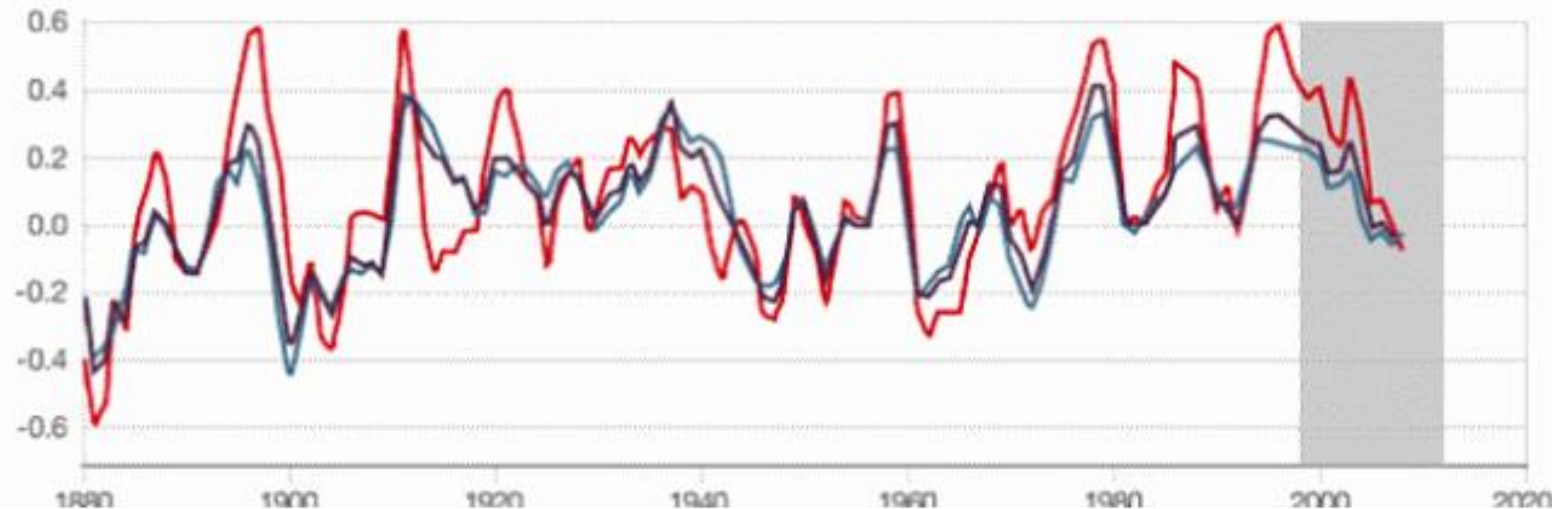
Share

Pause in global warming

Running nine-year trends in surface warming and upper ocean heat uptake. The recent slowdown in global warming is highlighted by the grey shading.

Trend (°C decade)

— Land only — Ocean only — Land and ocean



In 2013 the BBC reported The Pause was central to the IPCC report.

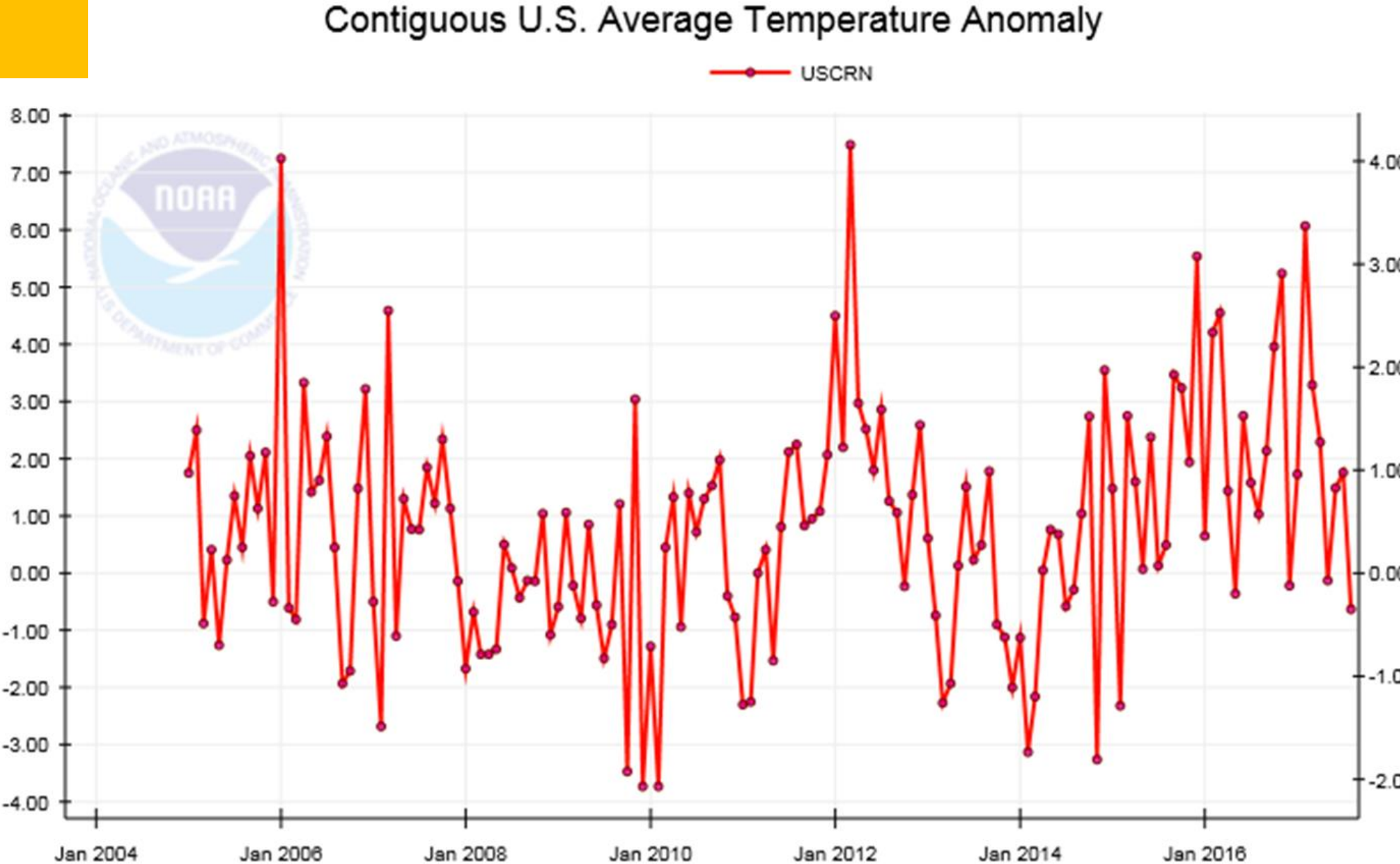
Five years later the NCA4 reports alarmingly about the last three years being so warm.

What happened?

From this

The USCRN surface Temperatures for the USA 2005-2016.

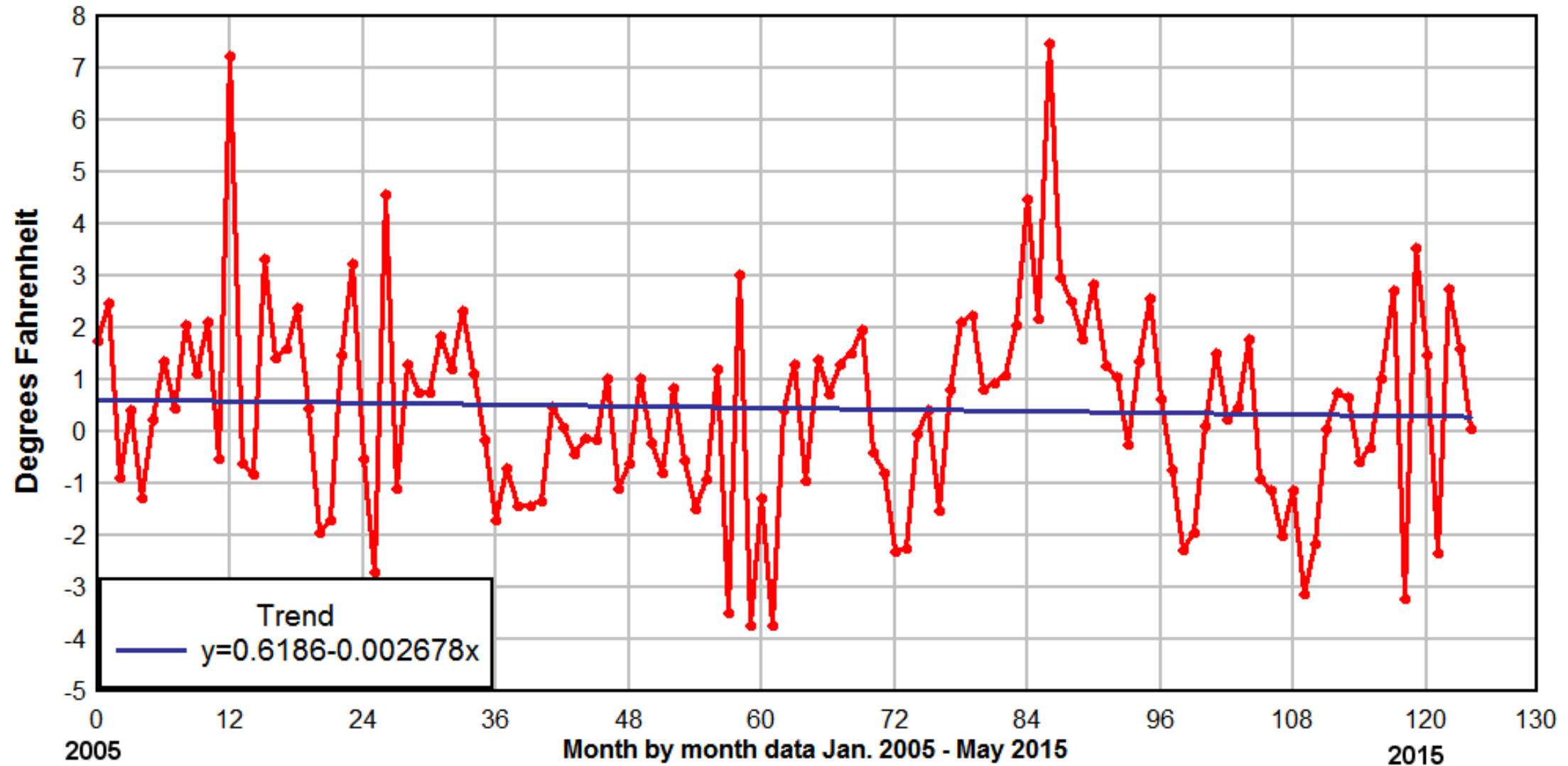
This is quite different from the National Climate Assessment which shows rapidly rising surface Temperatures.



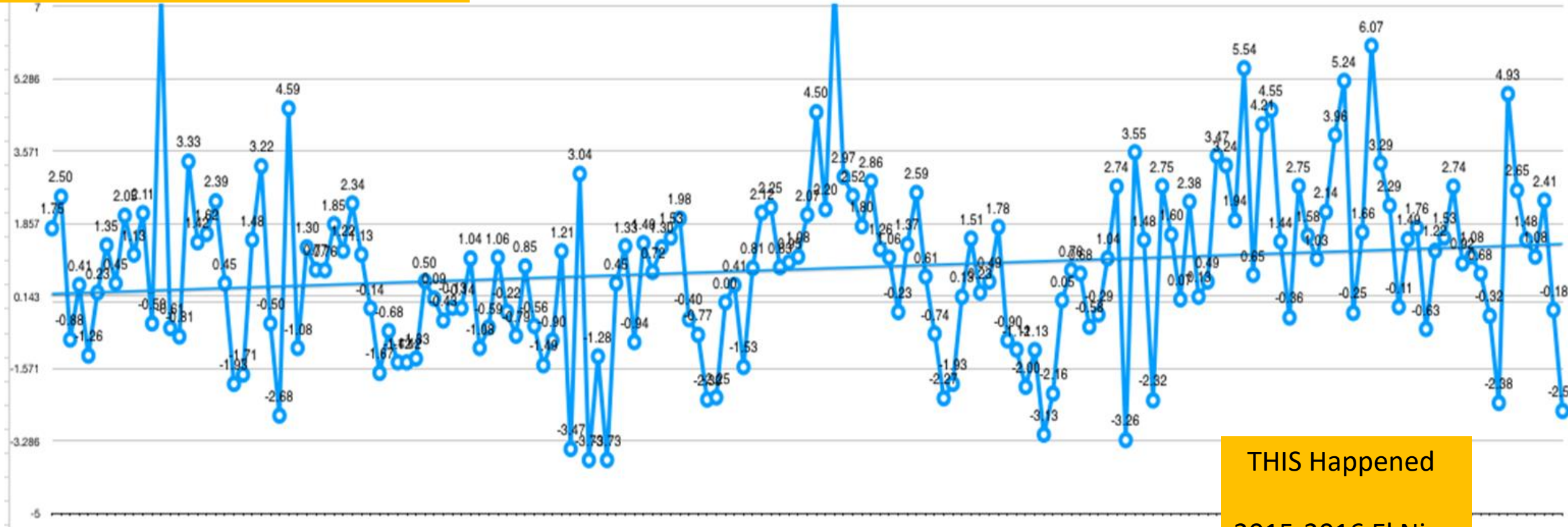
From this.....

Contiguous U.S. Average Temperature Anomaly (degrees F) 2005-2015

Source: NOAA U.S. Climate Reference Network (USCRN)



To this.....

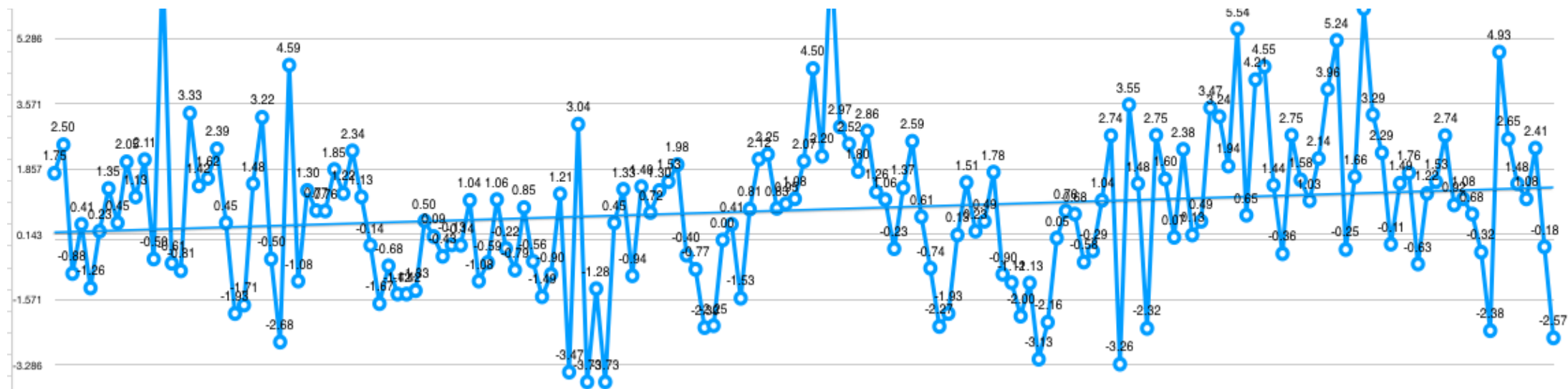
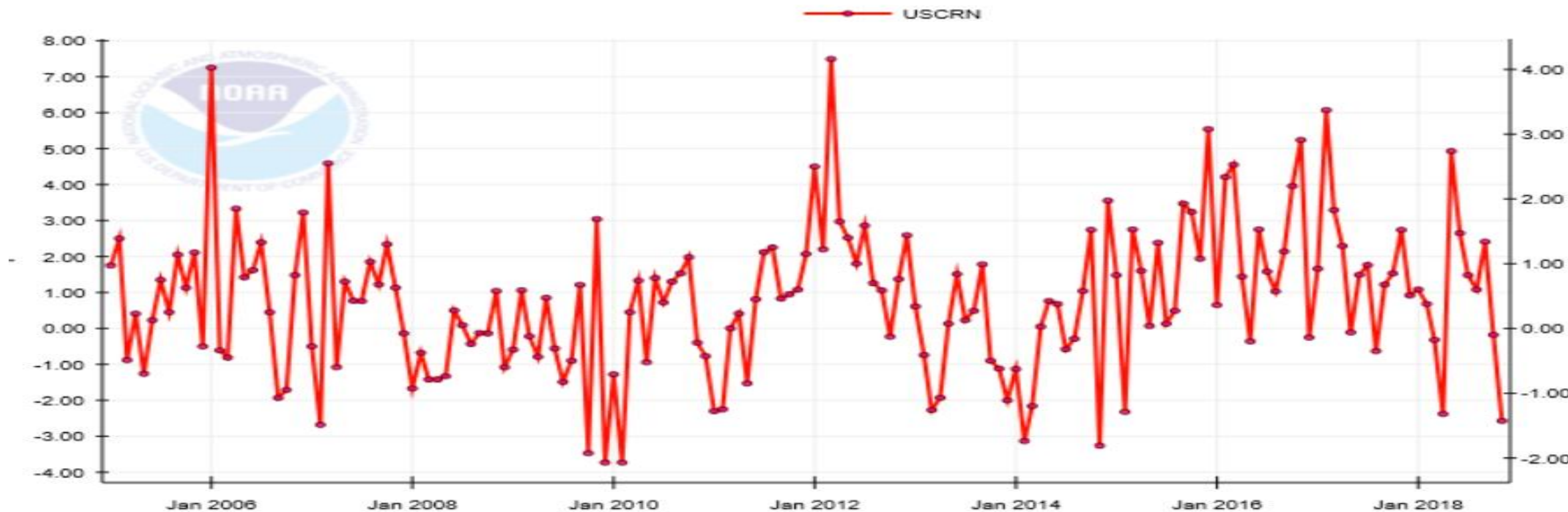


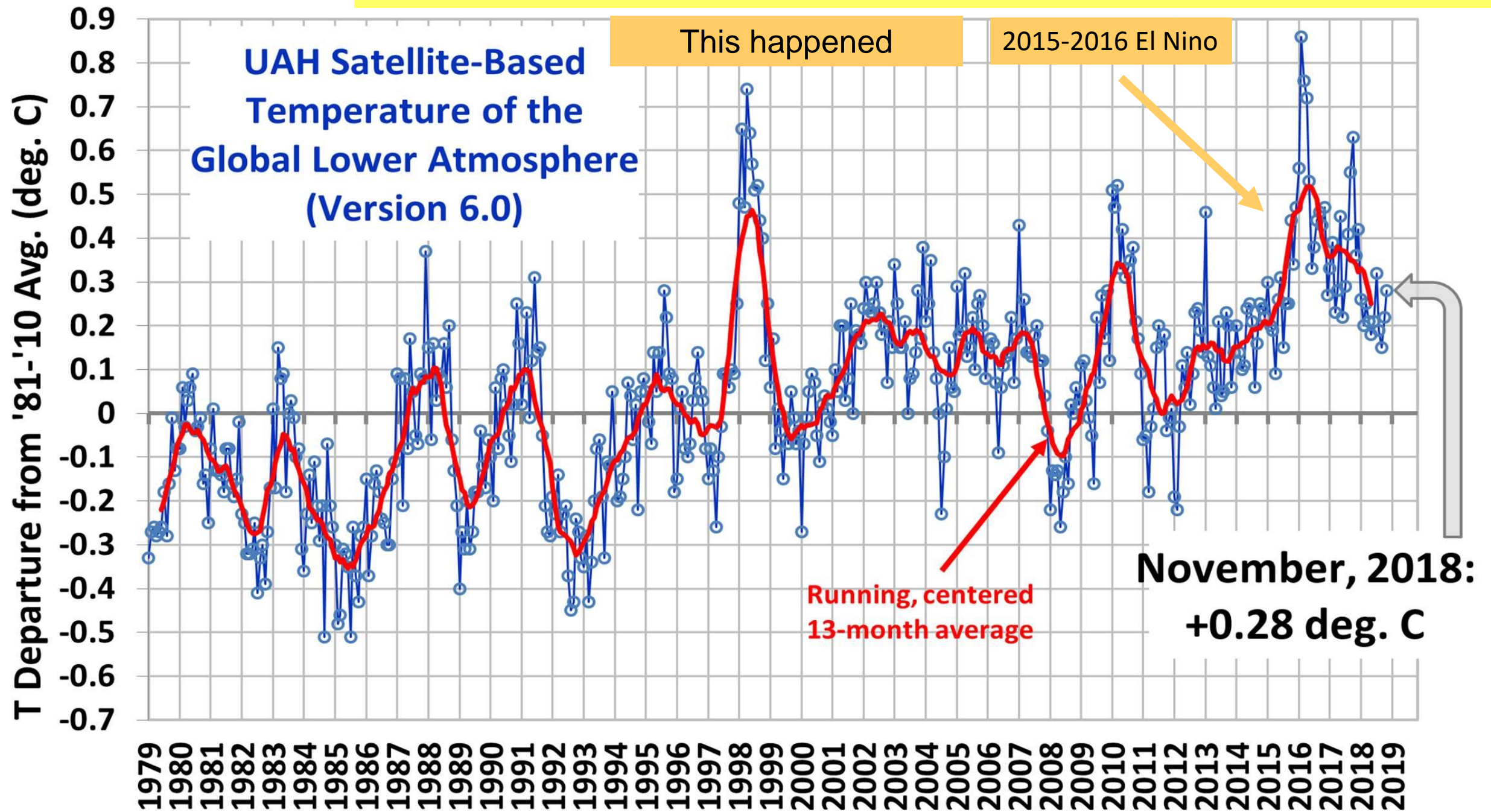
USCRN data plot from Bernie. Data Starts 1 Jan 2005 and extends to 30 Nov 2018

Mean Temp change = $1.60 - 0.15 = 1.45\text{F}$ in 13 years = 1.1F per decade

(Mean Temp change from 2005- 2015 was $-.4$ per decade)

Contiguous U.S. Average Temperature Anomaly

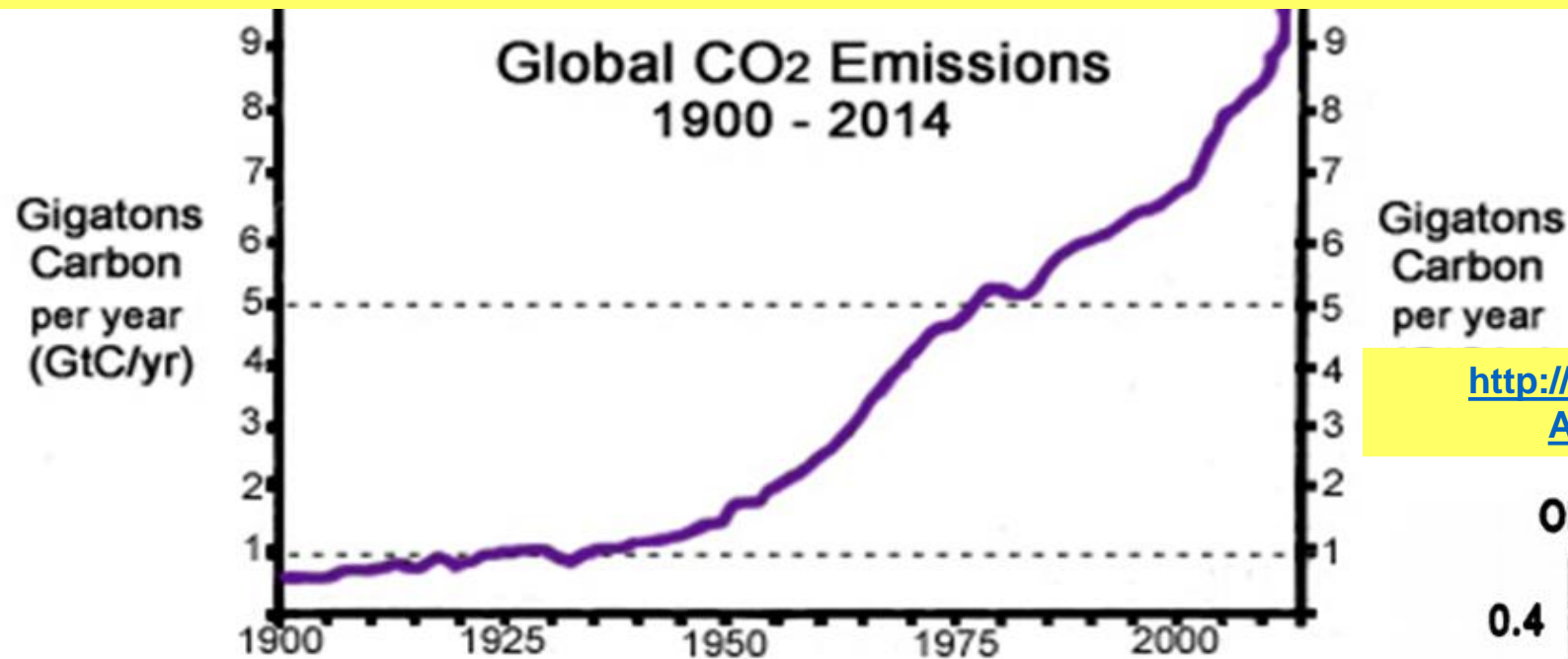




Executive Summary

Special Report

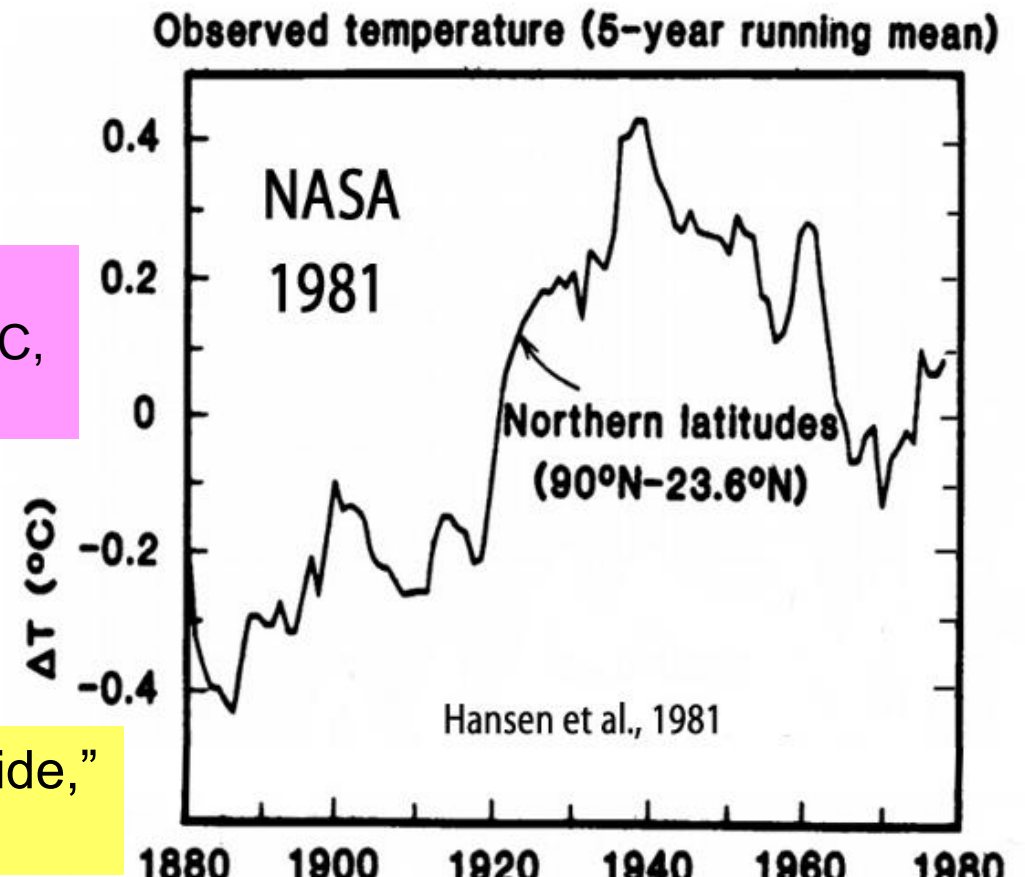
This assessment concludes, based on extensive evidence, that it is extremely likely that **human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century.** For the warming over the last century, there is no convincing alternative explanation supported by the extent of the observational evidence.



<http://people.oregonstate.edu/~schmita2/Teaching/ATS421-521/2015/papers/hansen81sci.pdf>

Observe the charts,

From 1940-1975, Global CO2 emissions **increased** from 1 to 5 GtC, Hansen published that **temperatures decreased** by -0.5C!



Hansen, J., "Impact of Increasing Atmospheric Carbon Dioxide," SCIENCE, 28 August 1981.

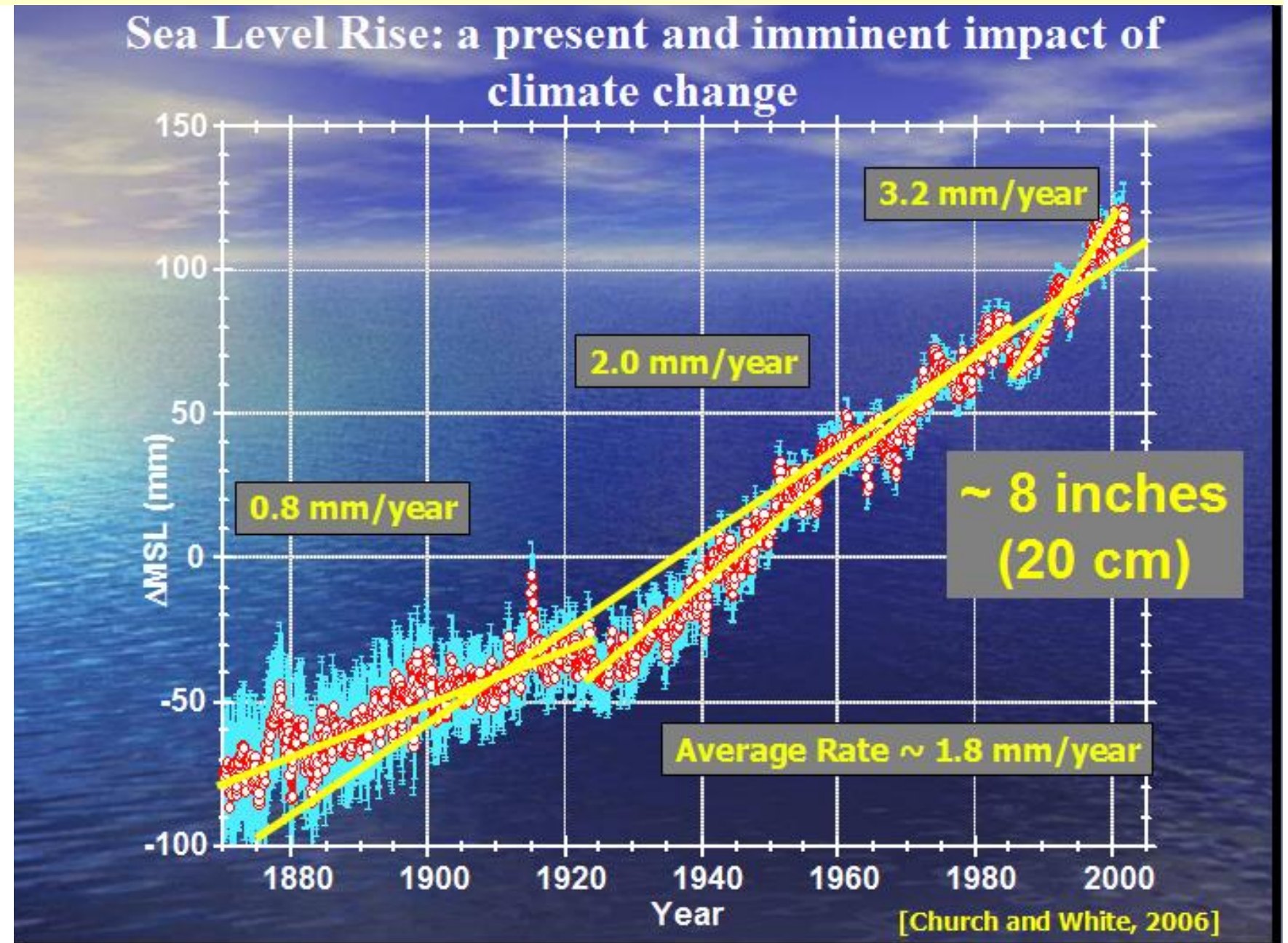
Executive Summary

Special Report

For example, **global average sea level has risen by about 7–8 inches since 1900, with almost half (about 3 inches) of that rise occurring since 1993.** Human-caused climate change has made a substantial contribution to this rise since 1900, contributing to a rate of rise that is greater than during any preceding century in at least 2,800 years

Let's consider the notion that the rate of sea level rise has accelerated, and that the rates of rise from this graphic should be taken seriously .

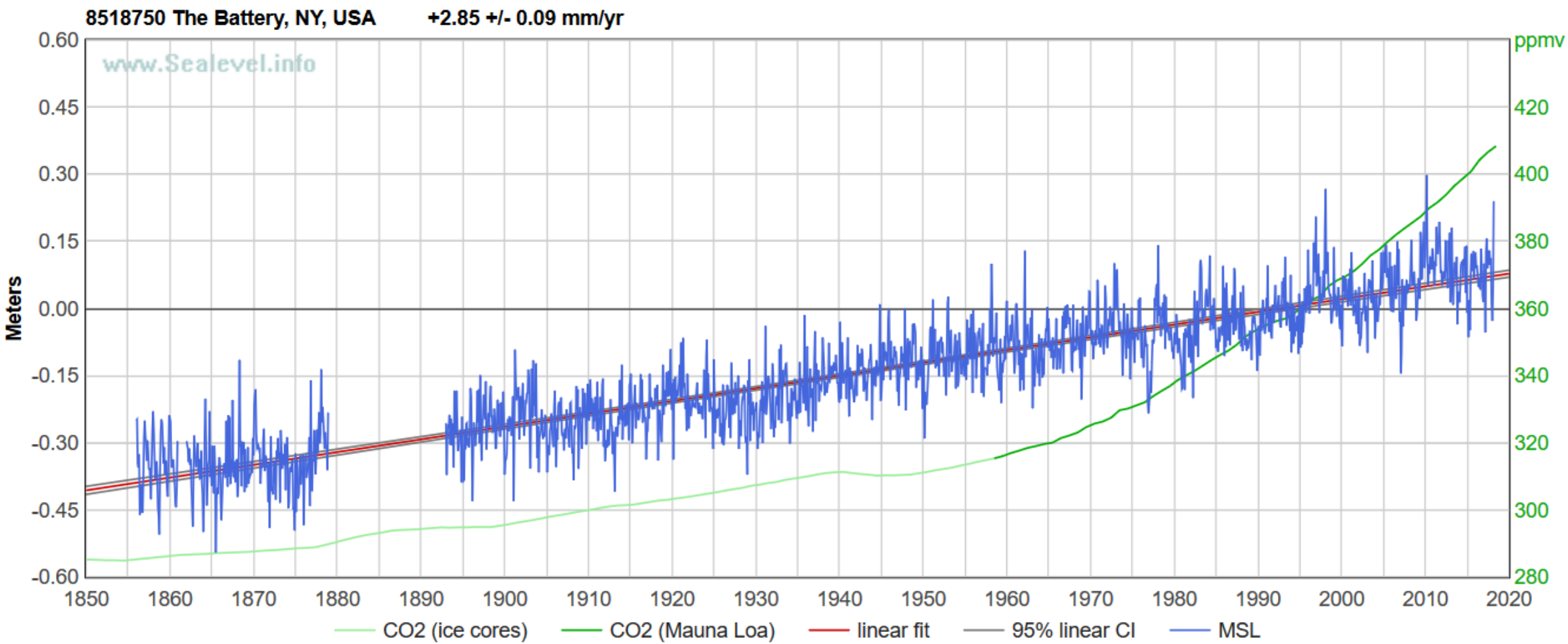
Do the following graphics either validate or disprove the claims in this graphic?



The claim is made **by changing the methodology** from tide gage to satellite in 1993. Let's see what happens if we use only long-lived tide gages in the USA. Here's the Battery, lower Manhattan. There's no doubling of rate of sea level rise, in fact no change in that rate. 1998's Sea Level-- about the same as 2018!

Sealevel.info → [Data](#) → 8518750

Mean Sea Level at The Battery, NY, USA (NOAA [8518750](#), 960-121, PSMSL [12](#))

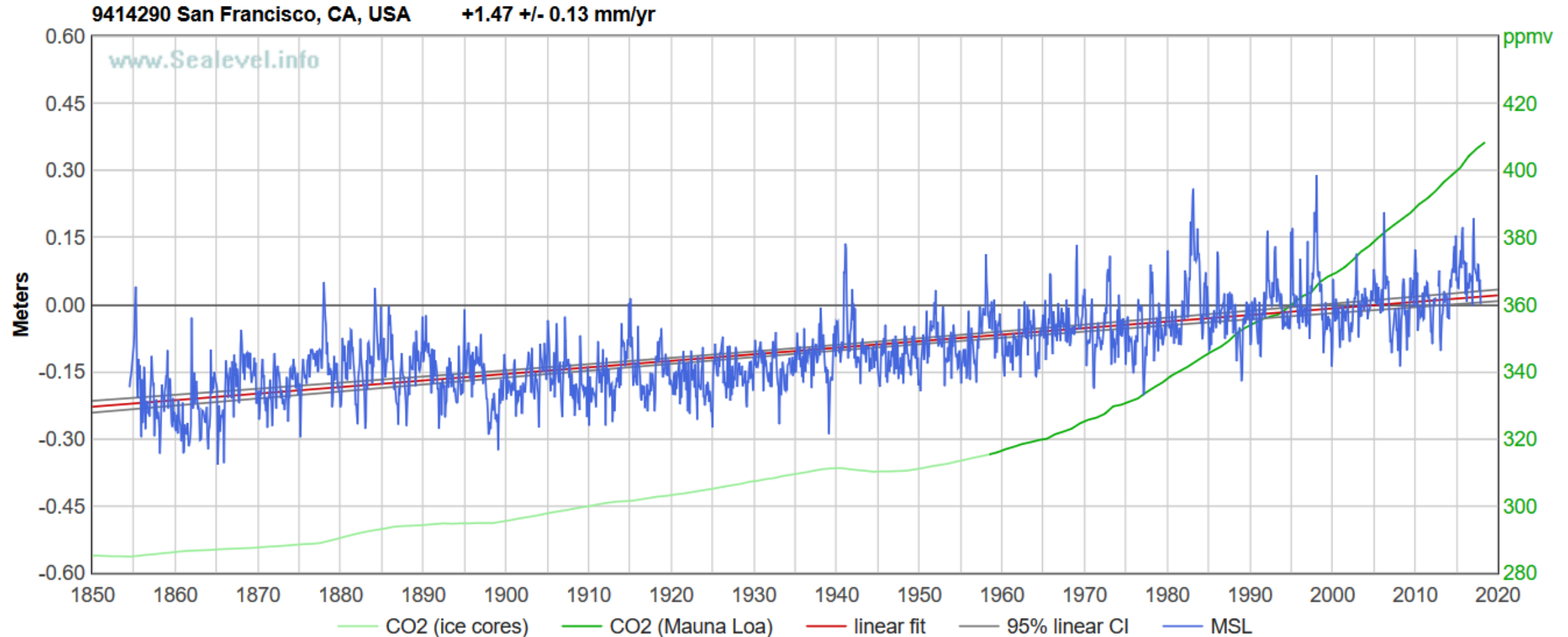


The mean sea level (MSL) trend at The Battery, NY, USA is +2.85 mm/year with a 95% confidence interval of ± 0.09 mm/year, based on monthly mean sea level data from 1856/1 to 2018/2. The linear fit has a slope of 0.0025 m/yr (R² = 0.003).

Let's see what happens if we use the longest-lived tide gage on the Pacific Coast, San Francisco. There is no doubling of rate of sea level rise. Sea Level in 1993 is about the same as 2018!

Sealevel.info → [Data](#) → 9414290

Mean Sea Level at San Francisco, CA, USA (NOAA [9414290](#), 823-031, PSMSL [10](#))



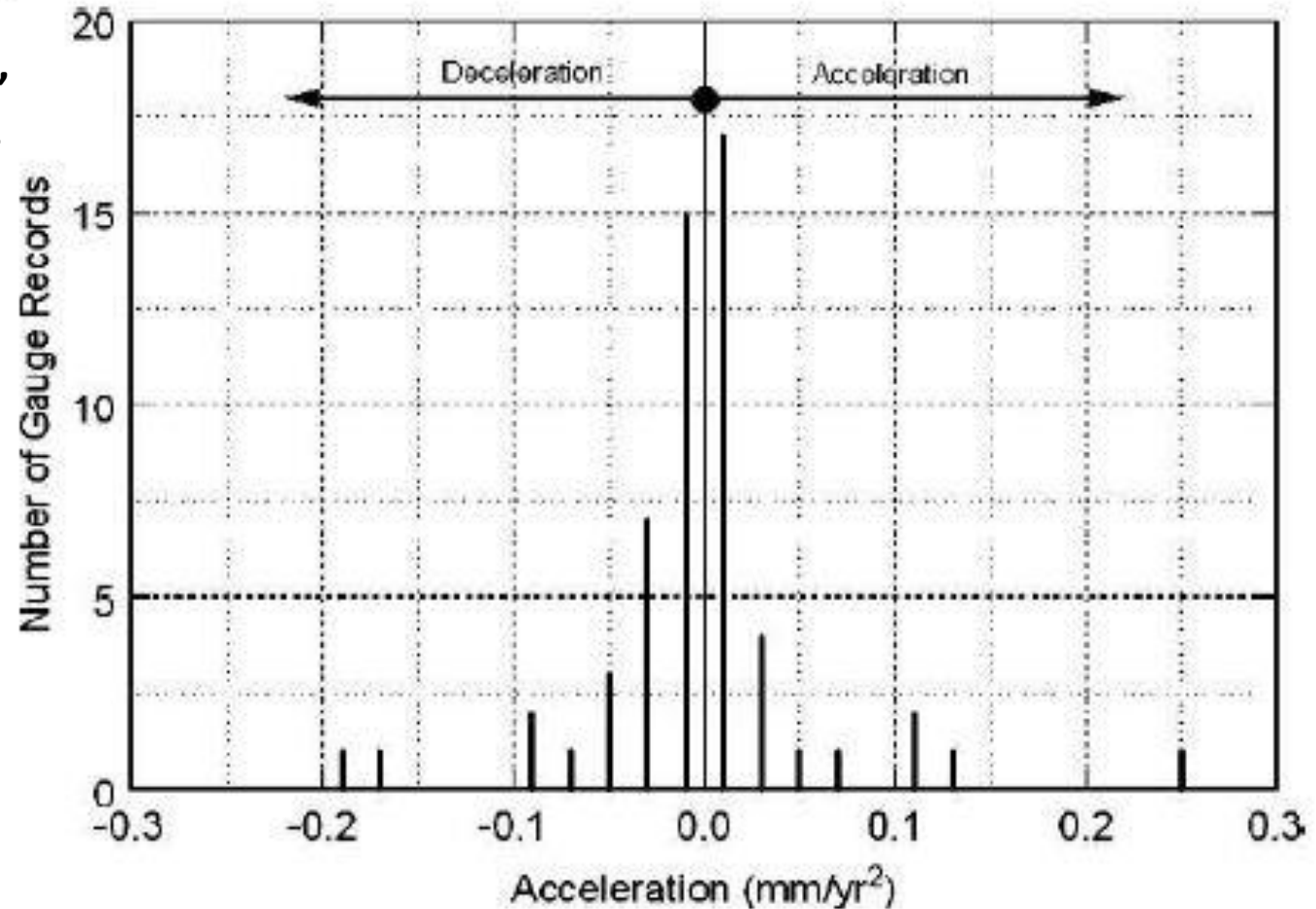
The mean sea level (MSL) trend at San Francisco, CA, USA is +1.47 mm/year with a 95% confidence interval of ± 0.13 mm/year, based on monthly mean sea level data from 1854/7 to 2017/12. That is equivalent to a change of 0.48 feet in 100 years. ([R-squared](#) = 0.559)

U.S. Tide Gauges: No Acceleration in Sea Level rise

<http://www.jcronline.org/doi/abs/10.2112/JCOASTRES-D-10-00157.1>

J.R. Houston and R.G. Dean,
Journal of Coastal Research

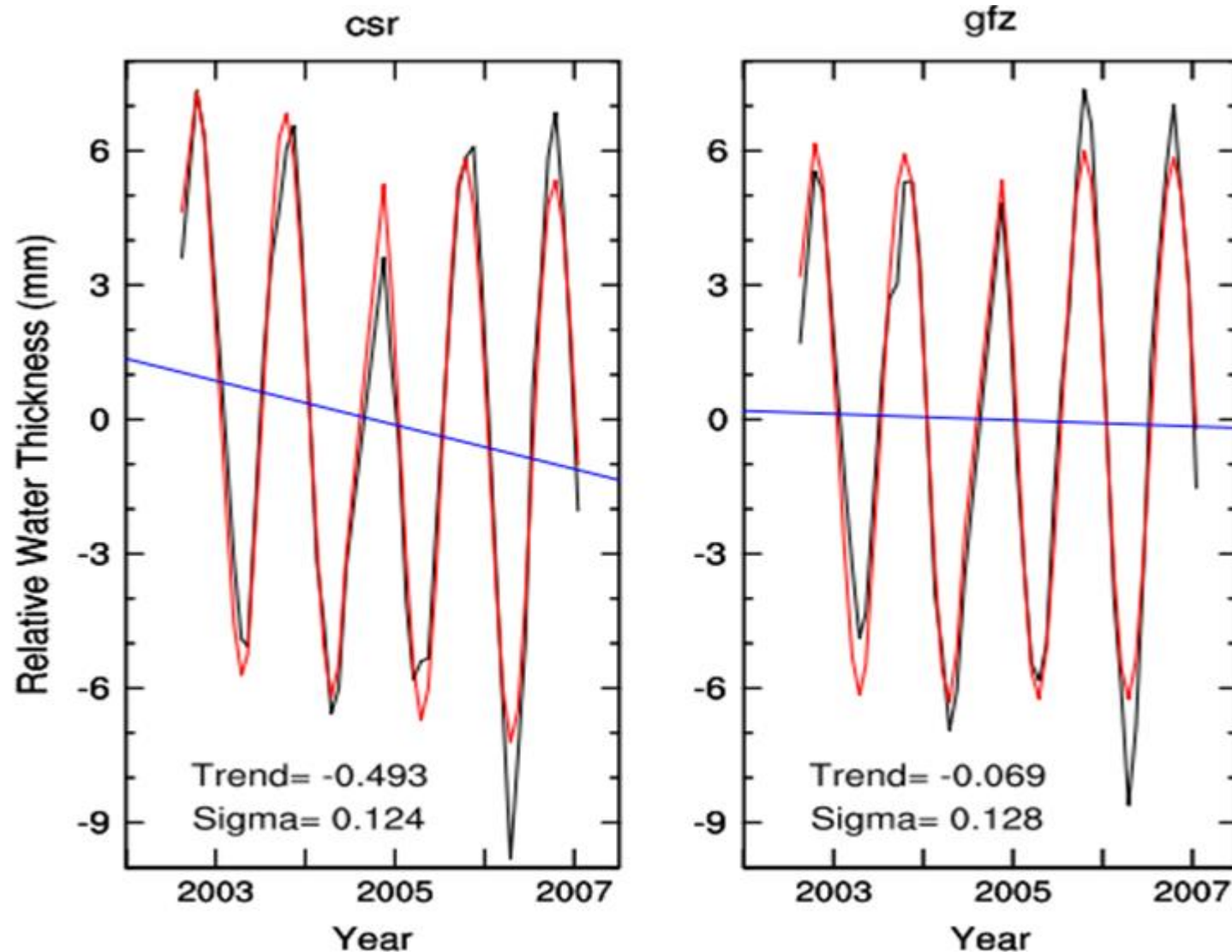
Tide Gages
Atlantic Coast
Gulf Coast
Pacific Coast
Alaska and Aleutians
US Pacific Islands



“worldwide-temperature increase has not produced acceleration of global sea level over the past 100 years”

“Insofar as the raw data is concerned, then...over the entire area of the global ocean, not only is there no increase in mass inferred to be occurring but the amount of mass contained within these basins is actually inferred to be decreasing! [sic.]”

“The average of these (raw GRACE) values is -0.28 mm yr^{-1} w somewhat more negative than the value recently reported by Cazenave et al. (2008) of -0.17 mm/year .”



GRACE satellite data: melted ice-mass +1.9 mm yr⁻¹ **BUT large adjustments to raw data!**

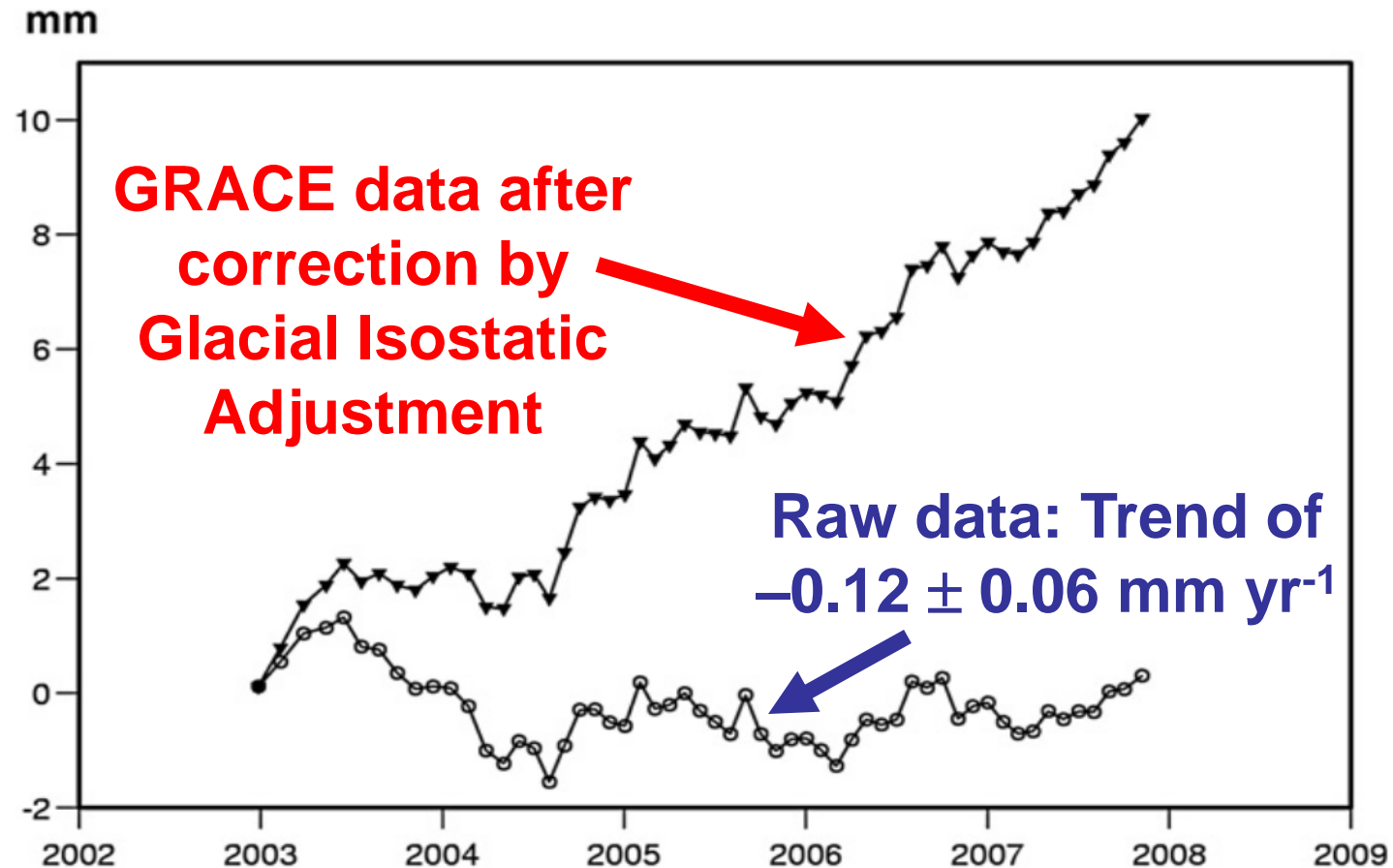
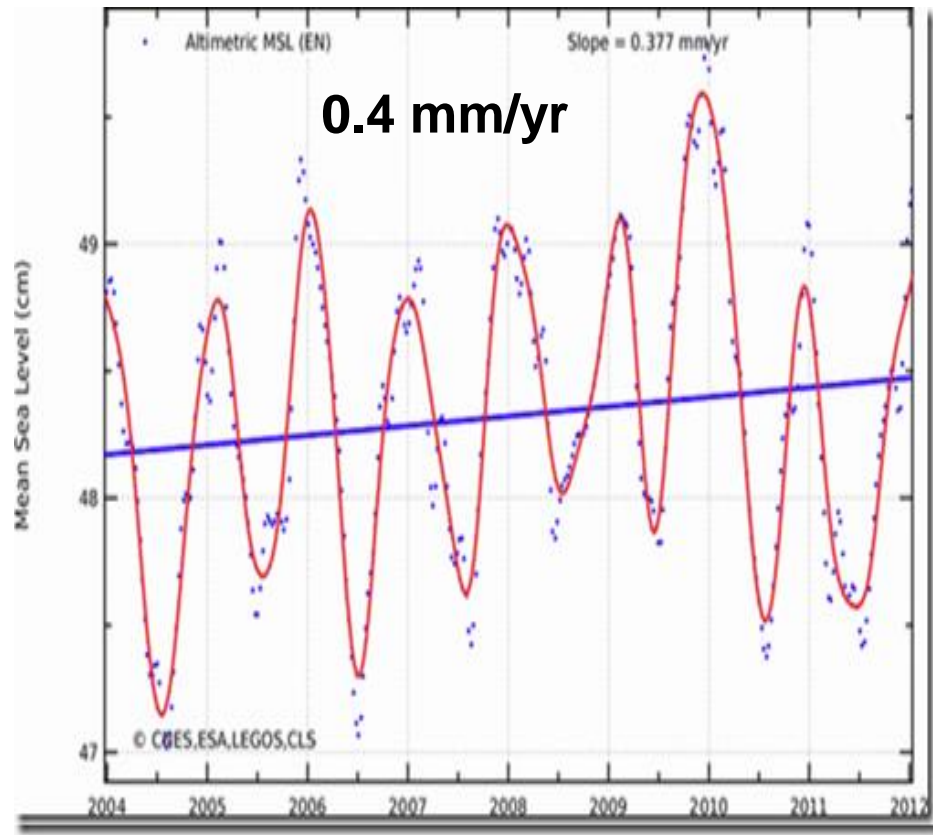


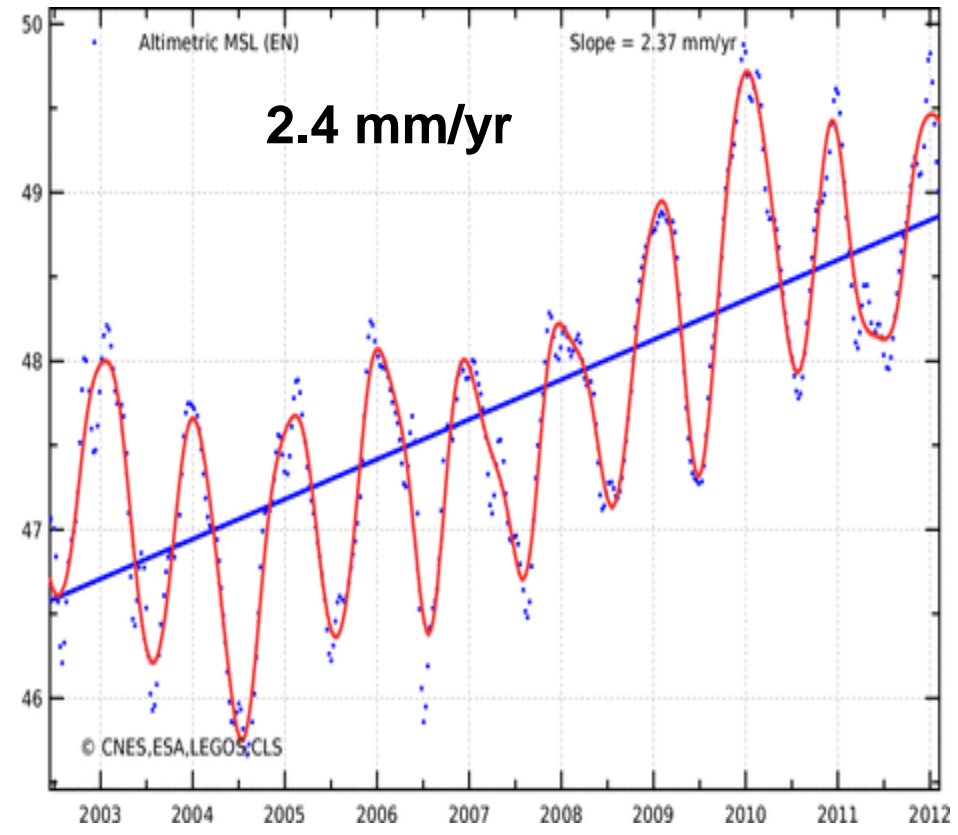
Fig. 1. Ocean mass change from GRACE over 2003–2008. The open circled curve is the raw time series. The black triangles curve corresponds to the GIA corrected time series.

Envisat's Radar Altimeter 2: Documented changes between April 6 and 10, 2012

April 6, 2012



April 10, 2012



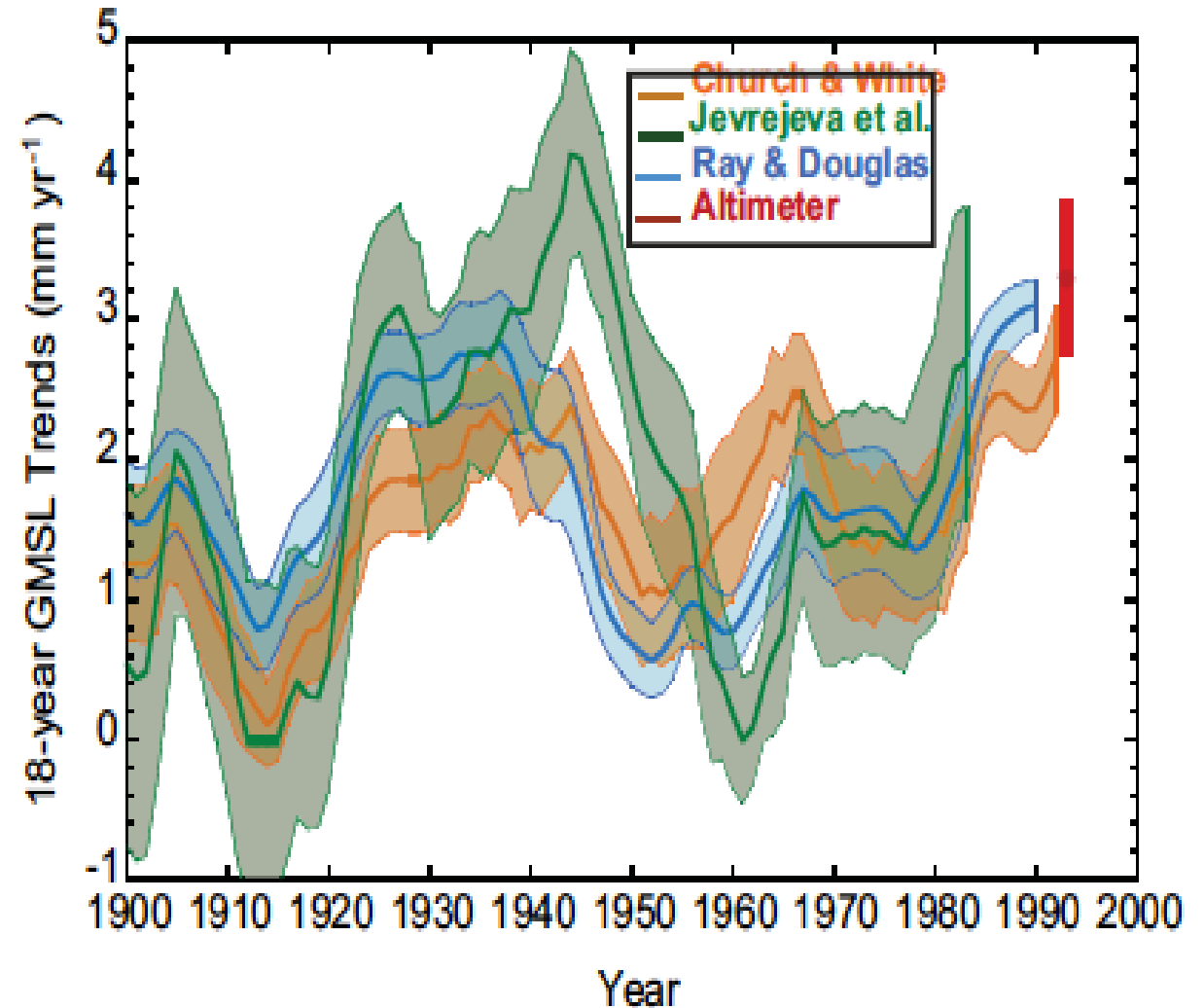
The IPCC AR5 SPM22 makes the following statements regarding global sea level rise:

“Over the period 1901–2010, global mean sea level rose by 0.19 [0.17 to 0.21] m” [about 7-8 inches]

*“It is very likely that the mean rate of global averaged sea level rise was 1.7 [1.5 to 1.9] mm yr⁻¹ between 1901 and 2010 . . . and 3.2 [2.8 to 3.6] mm yr⁻¹ between 1993 and 2010. **It is likely that similarly high rates occurred between 1920 and 1950.**”*

The rate of global mean sea level rise as portrayed in the IPCC AR5 is shown in Figure 6 below.

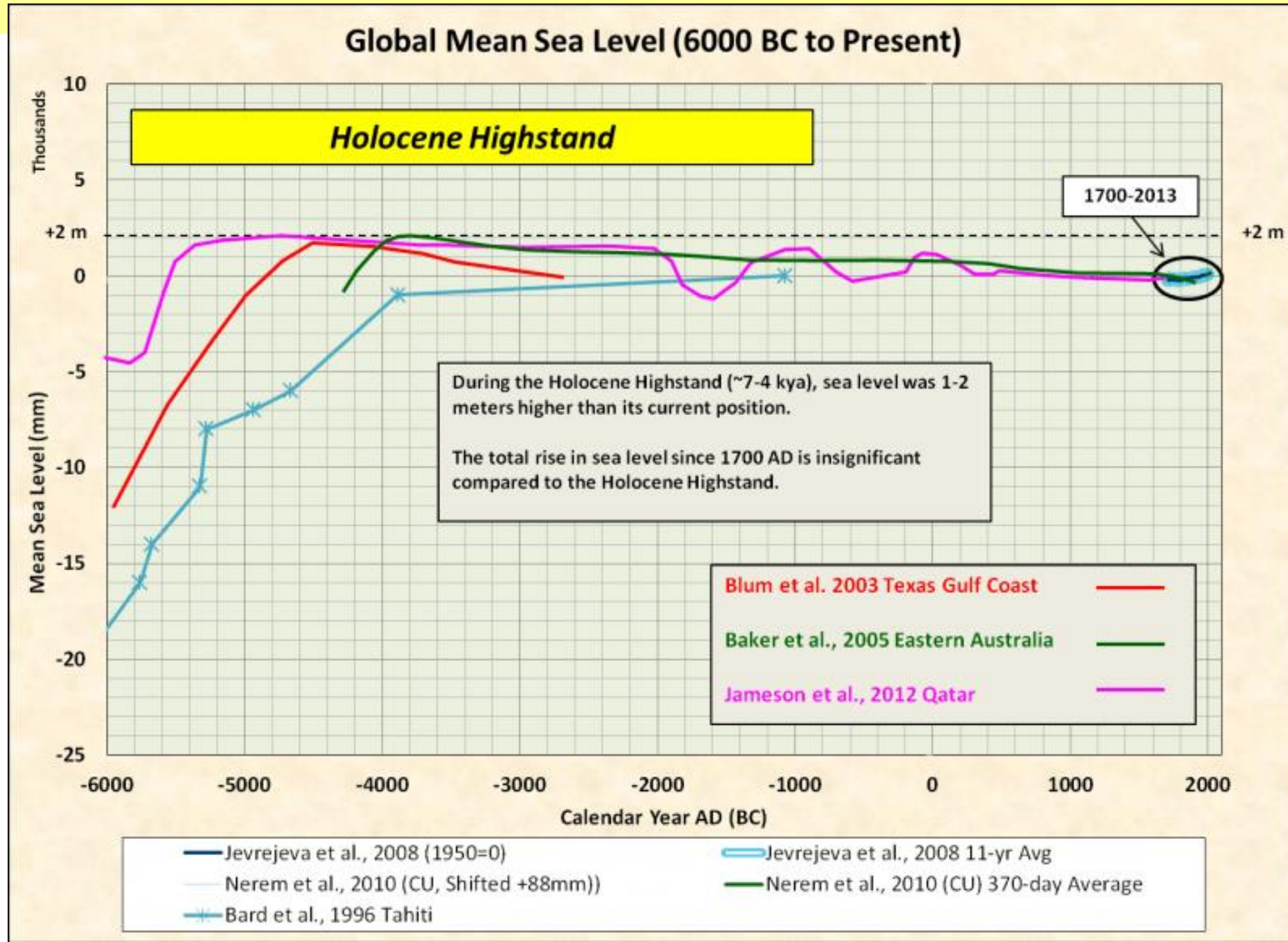
Dr Judith Curry
written testimony to
US Senate, 8 Dec 2015



Executive Summary

Special Report

For example, global average sea level has risen by about 7–8 inches since 1900, with almost half (about 3 inches) of that rise occurring since 1993. **Human-caused climate change has made a substantial contribution to this rise since 1900, contributing to a rate of rise that is greater than during any preceding century in at least 2,800 years**



?

“...since 1900...contributing to a rate of rise that is greater than during any preceding century in at least 2,800 years.

?

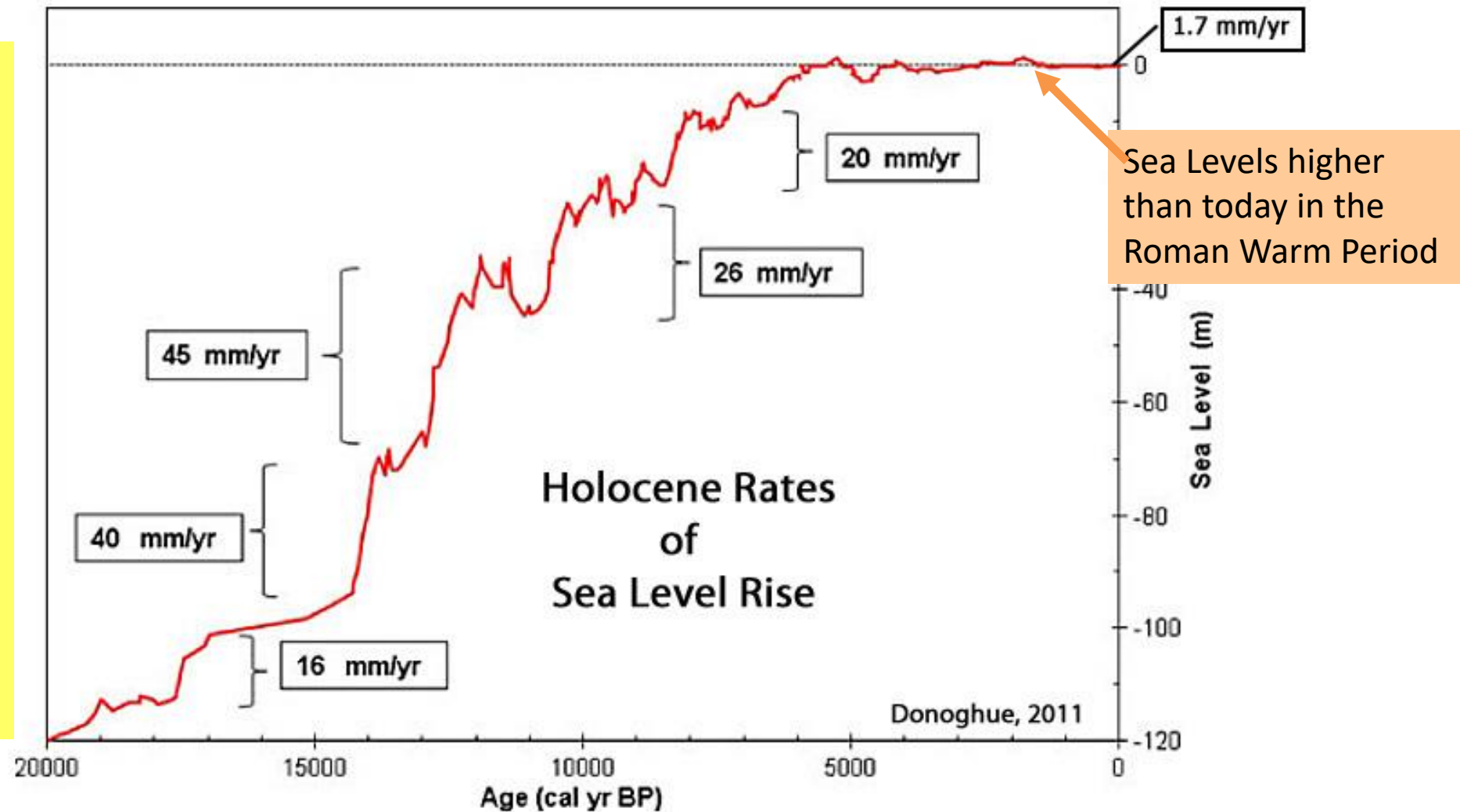


Fig. 3 Sea level history for the northern Gulf of Mexico since the last glacial maximum, based on approximately 300 radiocarbon-dated paleoshoreline indicators. Samples were taken from the coast and shelf of Florida, Louisiana, Texas, and Mexico. Several periods of rapid sea level rise are indicated. Figure adapted from Balsillie and Donoghue (2004)

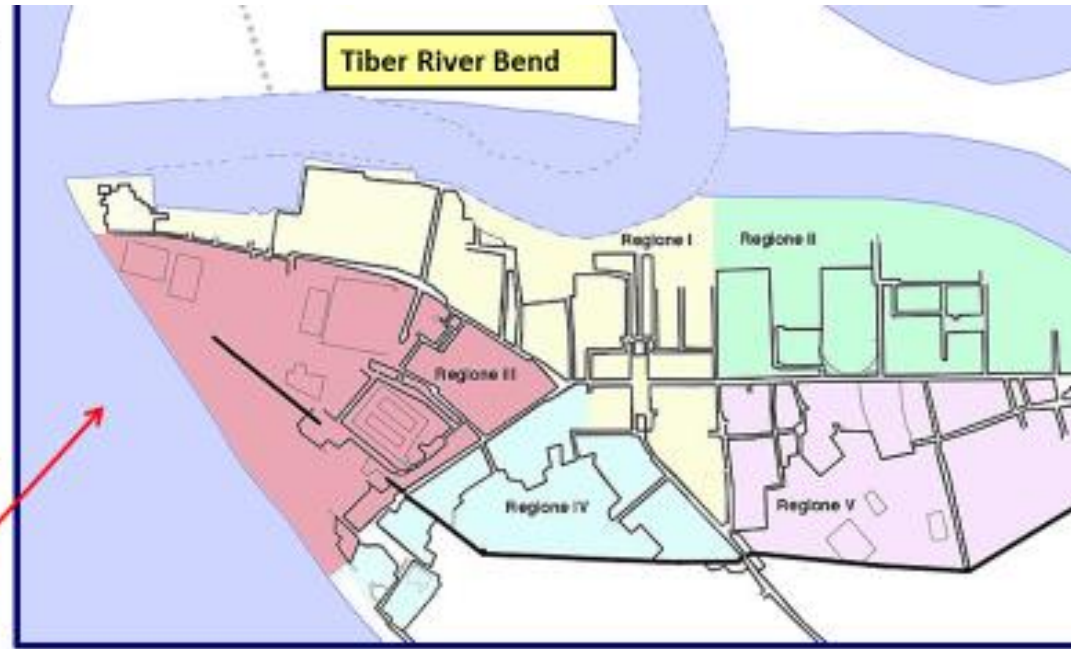
Further, the claim makes no references to historic information which confounds, even falsifies, what it says.

History

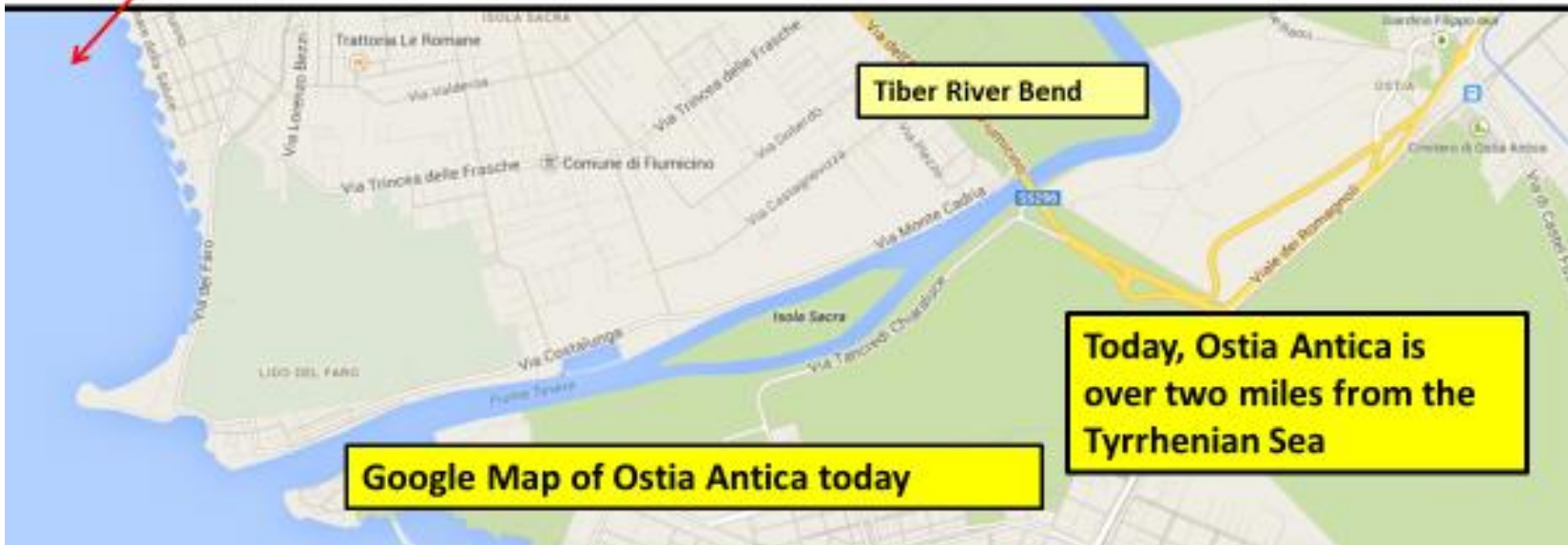
Sea Level Lessons from Ostia Antica, a port city of ancient Rome

History

Sea Level Lessons from Ostia Antica, a port city of ancient Rome



Tyrrhenian Sea



Tiber River Bend

Today, Ostia Antica is over two miles from the Tyrrhenian Sea

Google Map of Ostia Antica today

Sea Level was a lot higher during
The Roman Warm Period.

TOP: Ostia Antica map found in the ruins; shows level of Tyrrhenian Sea and the prominent bend of the Tiber.

BOTTOM: Ostia Antica on today's Google Map. Note the Tiber bend.

Sea Level fell during the Little Ice Age , now rising slowly.

NCA not disclosing these facts points to ignorance or fraud.

Take your choice.

Battle of Ostia in 849 AD as depicted in a painting attributed to Raphael
http://upload.wikimedia.org/wikipedia/commons/1/15/Raphael_Ostia.jpg



Ostia Antica Video

<https://youtu.be/7rPHHyB7mpU>

- Ostia Antica is the best-preserved Roman city in the world, better-preserved than Pompeii.
- Ostia Antica was suddenly abandoned and subsequently buried in silt from the Tiber River; it was exhumed by Mussolini.
- Think about that. Only way it could have been buried in silt: sea level was higher in the historic past.
- Key to the geography is that bend in the Tiber mapped by the Romans at Ostia, and seen in Google Maps of today.
- That Tiber bend is visible for only 1.5 seconds at the 10-second mark; watch carefully!

I have dozens of references to higher sea levels during historic times, in my lesson, https://casf.me/wp-content/uploads/2017/10/PDF_Climate-History-2-and-History-Falsifies-Climate-Alarmist-Sea-Level-Claims17_Oct_2017.pdf Examples below:

- In antiquity Ur, Iraq, was a seaport, it's now 100 miles from the Persian Gulf and now 13 Ft MSL, the field elevation of Ali Air Base.
- Ephesus, ancient seaport city in present Turkey now a mile from the Mediterranean Sea.
- Battle of Thermopylae, 480 BC. Small force of Spartans held off the Persians on a narrow beach between mountains and the sea, until Athens was notified of the invasion. Sea level fell, that area is two kilometers wide today.
- Up and down the English Channel are castles, the Saxon Sea Forts on the Saxon Shore, erected by the Romans to defend from Viking and other attackers, and now are some distance from the Channel:
- https://en.wikipedia.org/wiki/Saxon_Shore#/media/File:Litus_Saxonicum.png



Locations of major events in 1066



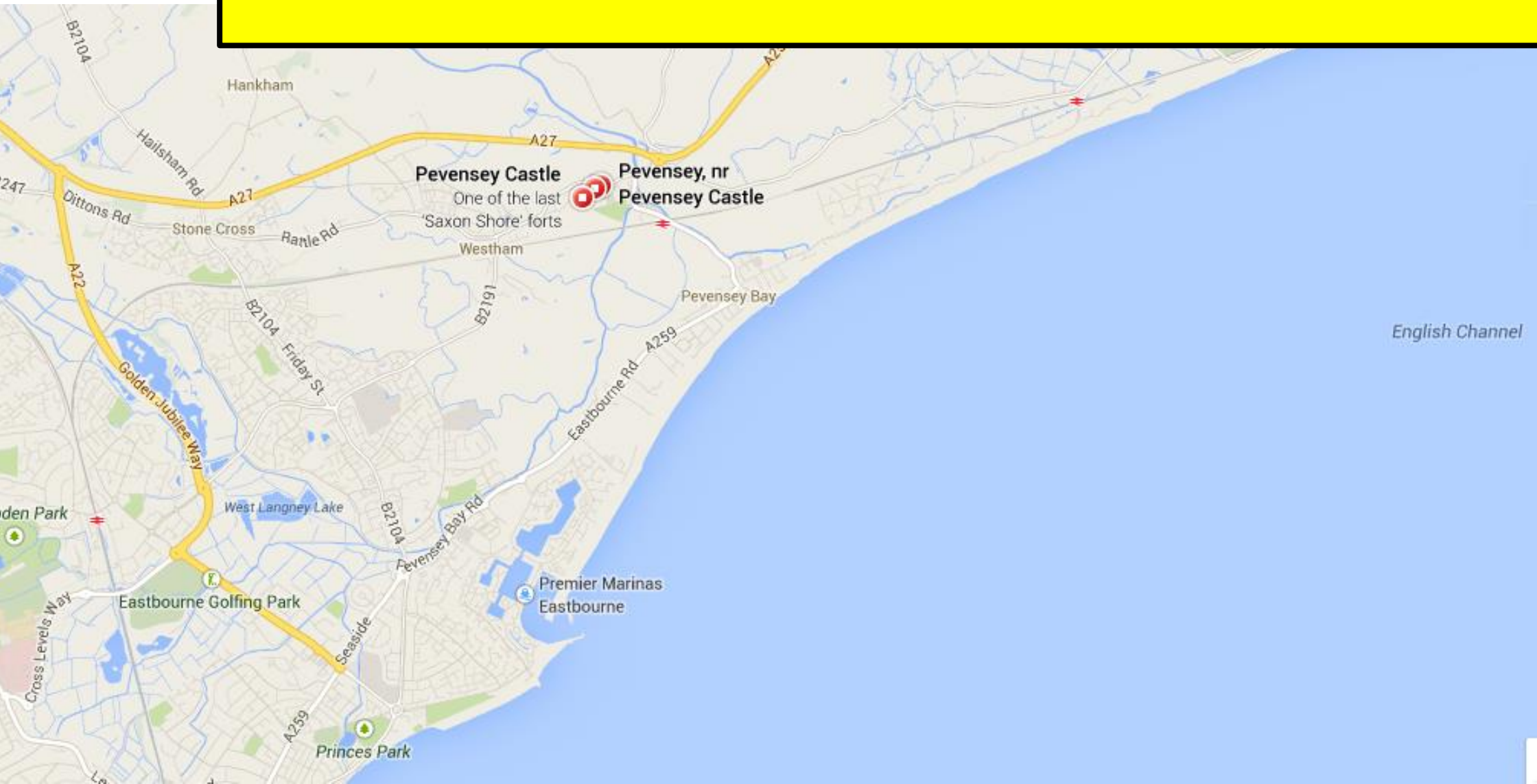
William (the Conqueror)



Pevensey Castle Today



**Today, Pevensey Castle is over a mile inland
from the English Channel**



The Elevation feature on Google Earth shows the castle is 12 ft above sea level

The screenshot shows the Google Earth interface. On the left, the 'Layers' panel is expanded, showing various map features like 'Primary Database', 'Borders and Labels', 'Places', 'Photos', 'Panoramio', '360 Cities', 'Roads', '3D Buildings', 'Ocean', 'Weather', 'Gallery', 'Global Awareness', and 'More'. The 'Places' list includes 'My Places', 'Sightseeing Tour', and 'Temporary Places'. The 'Layers' panel also has an 'Earth Gallery >>' button. The main map area shows a satellite view of Pevensey Castle, a large stone structure surrounded by a moat. A white information box is overlaid on the map, displaying an aerial photo of the castle and the text: 'Pevensey Castle. Free aerial photo from www.fotoflight.co.uk'. Below the photo, there are links: 'By clarksn', 'Fly to this photo's location', 'Misplaced?', 'Inappropriate', 'Comment it', and 'Panoramio Upload your photos'. The status bar at the bottom shows the date '7/8/2013', latitude '50.815634°', longitude '0.345506°', elevation '12 ft', and eye altitude '3633 ft'. The Google Earth logo is visible in the bottom right corner.

Google Earth

File Edit View Tools Add Help

▼ Search

Search

ex: NYC

Get Directions History

▼ Places

- My Places
- Sightseeing Tour
 - Make sure 3D Buildings layer is checked
- Temporary Places
- ~GE790.kmz

Layers Earth Gallery >>

- Primary Database
- Borders and Labels
- Places
- Photos
- Panoramio
- 360 Cities
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More

Pevensey Castle. Free aerial photo from www.fotoflight.co.uk

By [clarksn](#)

[Fly to this photo's location](#)

[Misplaced?](#)
[Inappropriate](#)
[Comment it](#)

Panoramio

[Upload your photos](#)

© 2014 Google

N50.81°

Pevensey Bay

Google earth

Tour Guide 2004

Imagery Date: 7/8/2013 lat 50.815634° lon 0.345506° elev 12 ft eye alt 3633 ft

Executive Summary

Special Report

Changes in the characteristics of extreme events are particularly important for human safety, infrastructure, agriculture, water quality and quantity, and natural ecosystems. Heavy rainfall is increasing in intensity and frequency across the United States and globally and is expected to continue to increase. The largest observed changes in the United States have occurred in the Northeast.

Human Safety:

Would that mean deaths from the heat or freezing to death?

<https://www.usatoday.com/story/weather/2015/05/20/cold-weather-deaths/27657269/>



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NEWS

SPORTS

LIFE

MONEY

TECH

TRAVEL

OPINION



75°

CROSSWORDS

M

Study: Cold kills 20 times more people than heat

Doyle Rice, USA TODAY

Published 6:32 p.m. ET May 20, 2015 | Updated 9:07 a.m. ET May 21, 2015

“Cold weather ...20 times as deadly as hot weather... it's not the extreme low/high temperatures that cause...most deaths...study...published Wednesday.

Majority of deaths occurred on moderately hot and moderately cold days instead of during extreme temperatures.

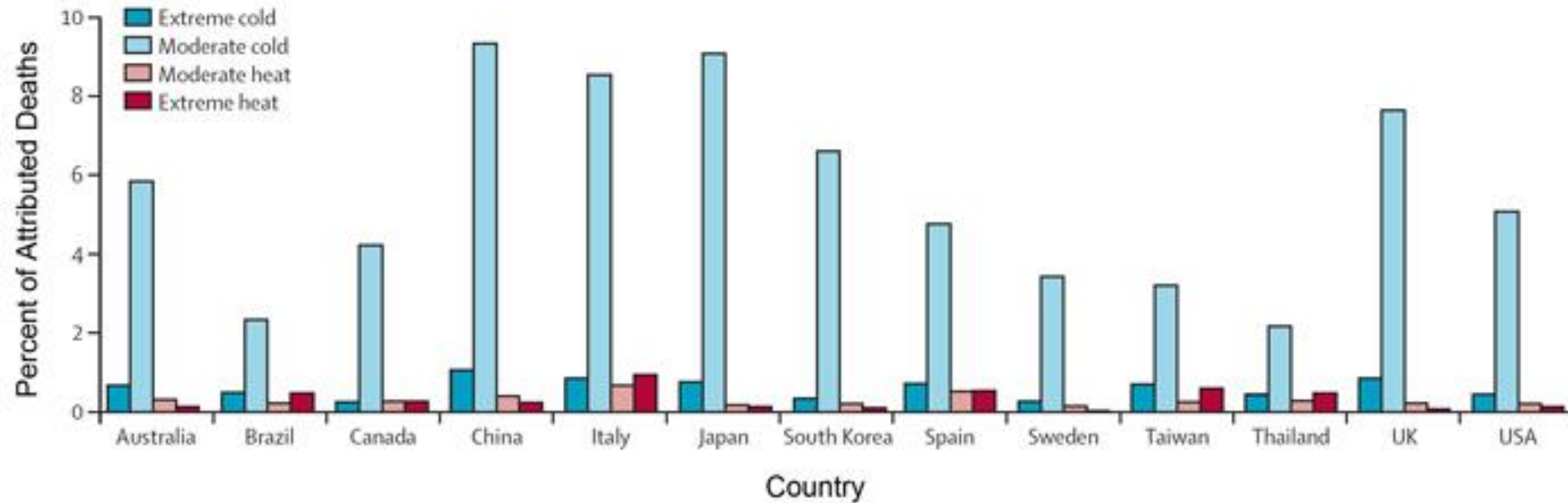
“... risk of mortality due to extremely cold or hot days is actually higher, they are less frequent,”
...author Antonio Gasparrini, London School of Hygiene & Tropical Medicine.

The study...(was)...published in the British journal *The Lancet*...

<http://www.co2science.org/articles/V18/aug/a11.php>

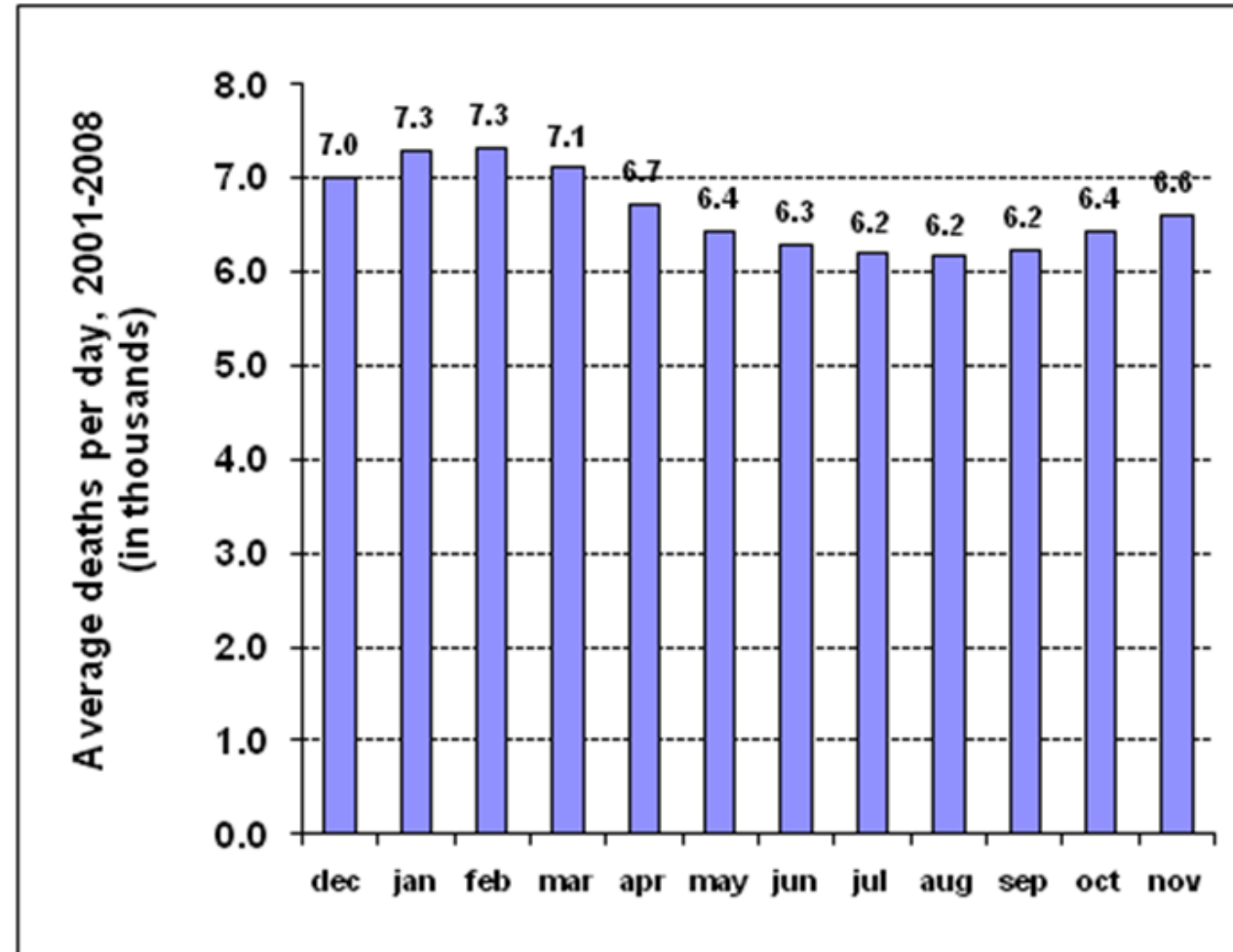
Cold waves kill many more people than heat waves.

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



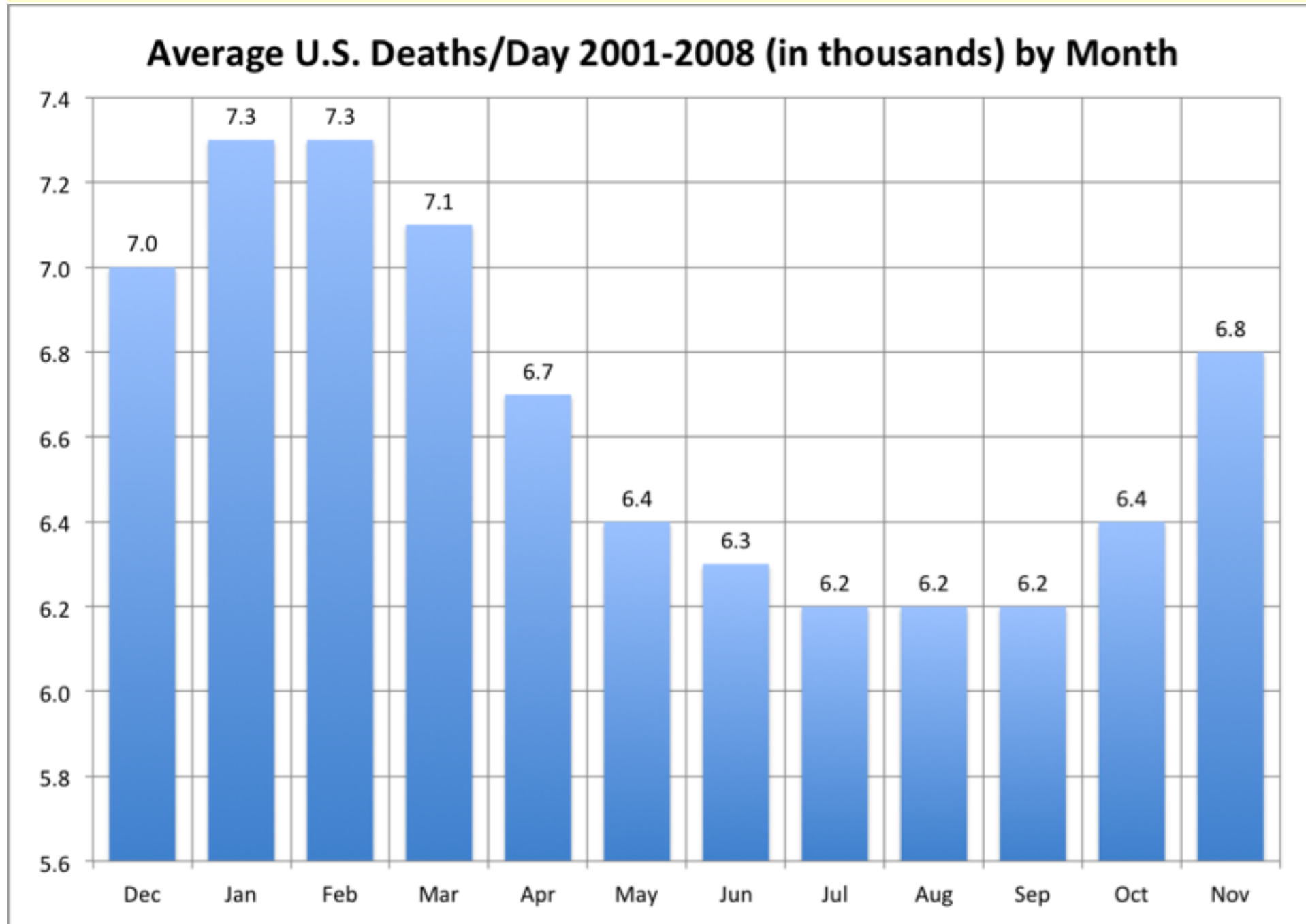
Fraction of all-cause mortality attributable to moderate and extreme hot and cold temperature by country. (Source: Gasparrini et al., 2015).

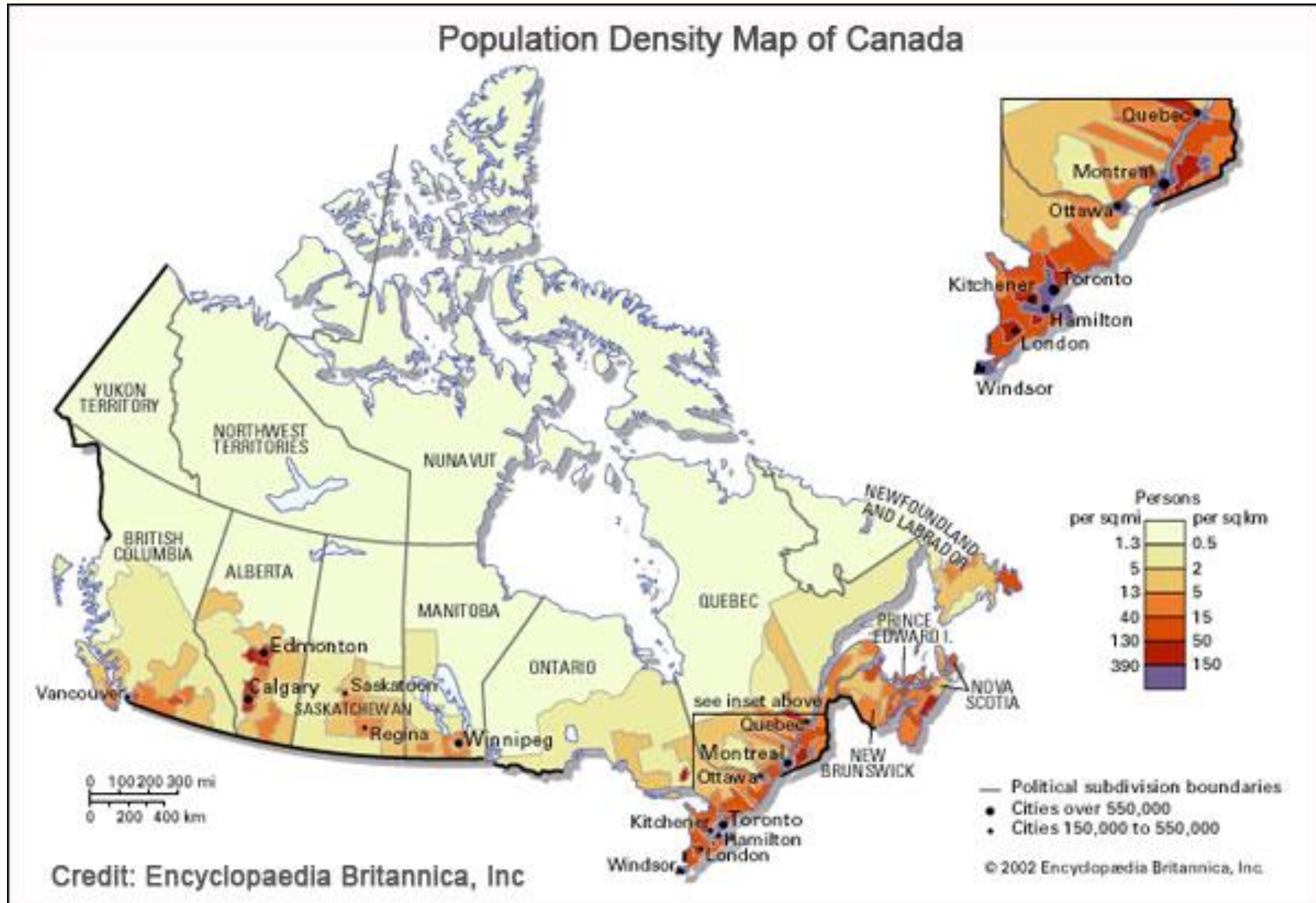
The data show that it is Cold Temperatures which cause the highest human death rates; Warmer Temperatures have lower death rates.



US National Center for Health Statistics, DataWarehouse

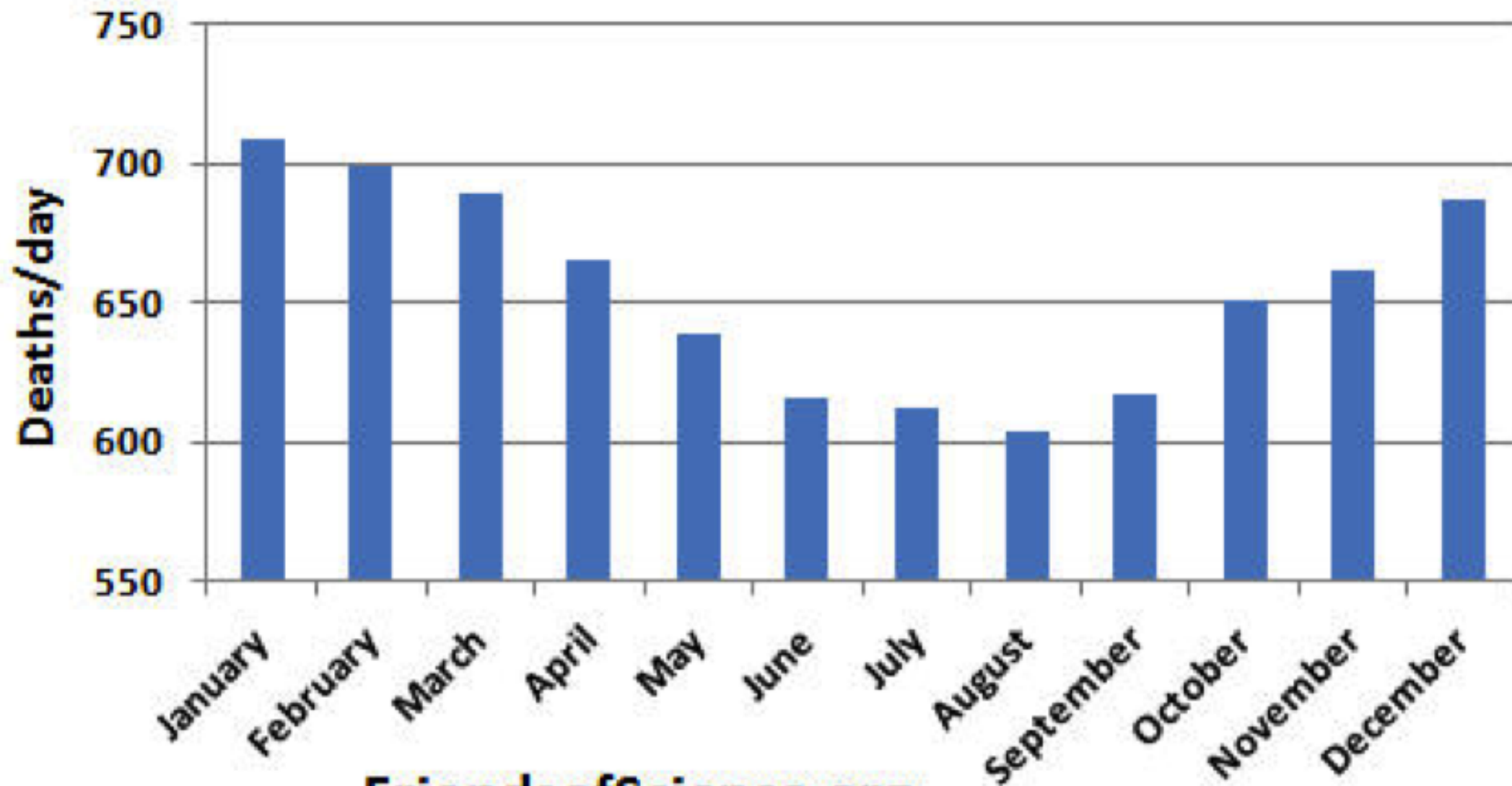
http://www.cdc.gov/nchs/datawh/statab/unpubd/mortabs/gmwkIV_10.htm





Death Rate in Canada by Month

Average 2007 to 2011

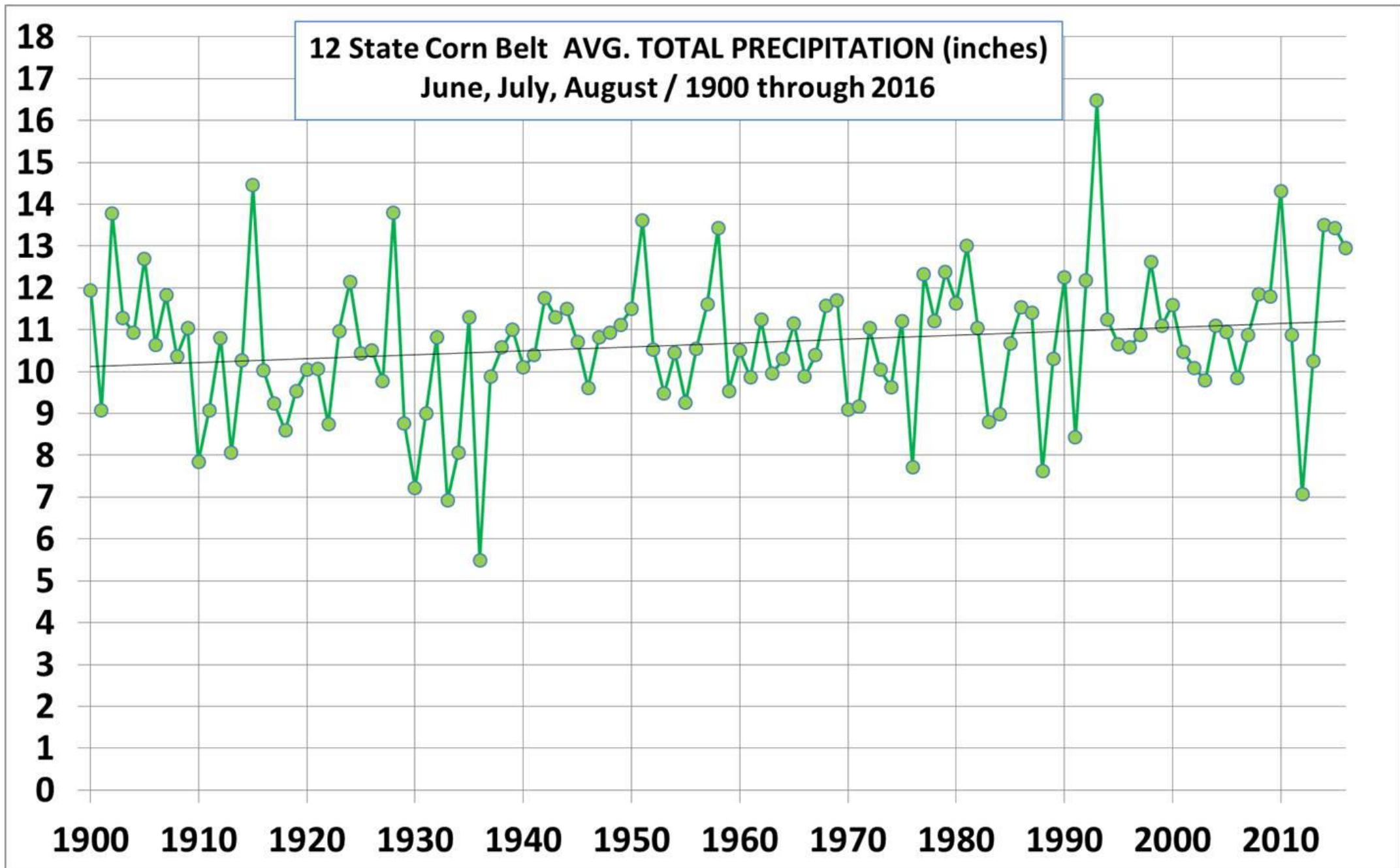


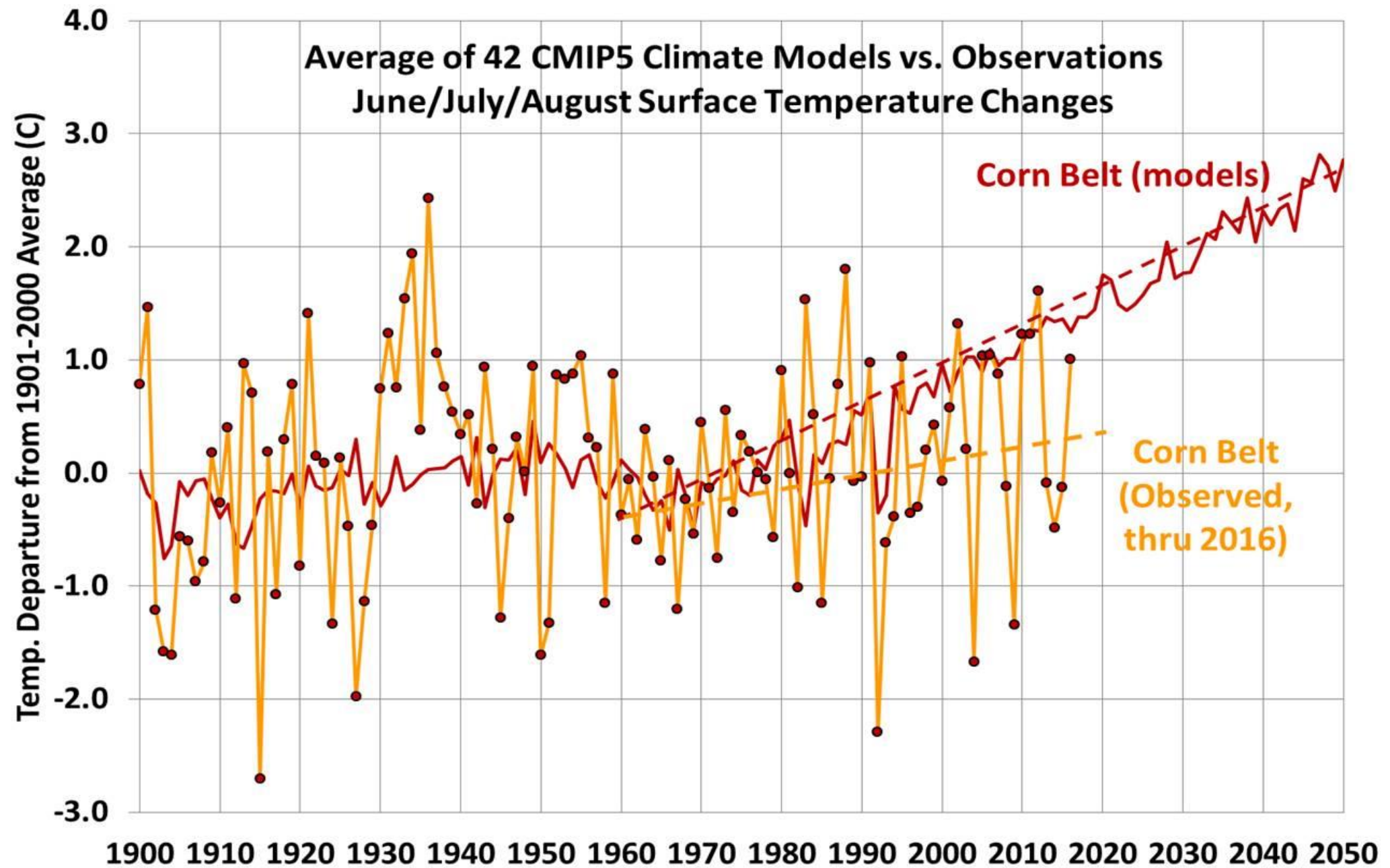
FriendsofScience.org

NCA4 mentions Human Safety and...

Agriculture...

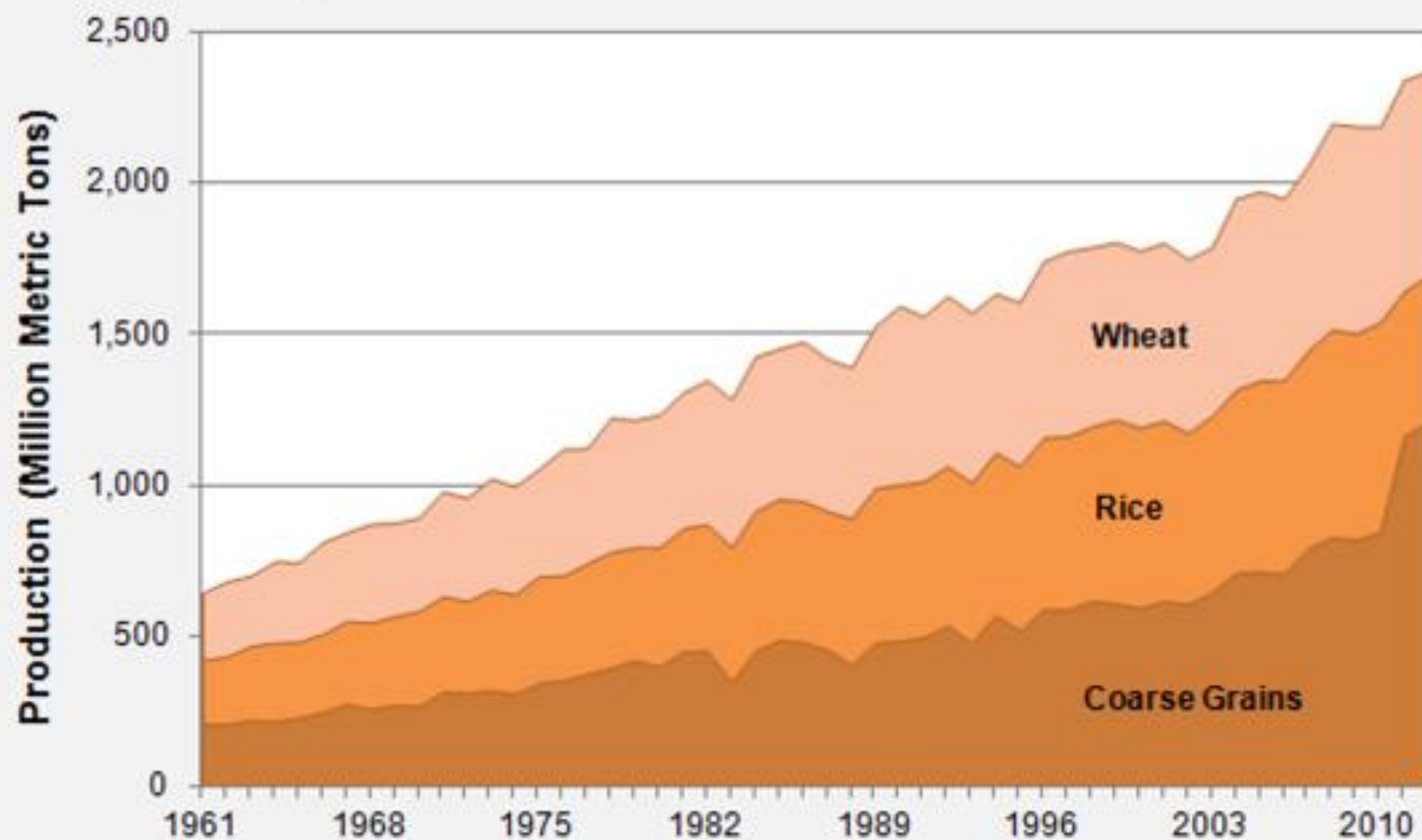
Let's examine some statistics from the
Grain Belt of the USA





The Devastating Impact of CO₂ on Agriculture

Figure 1. World Grain Production, 1961-2012



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

From Wikipedia:

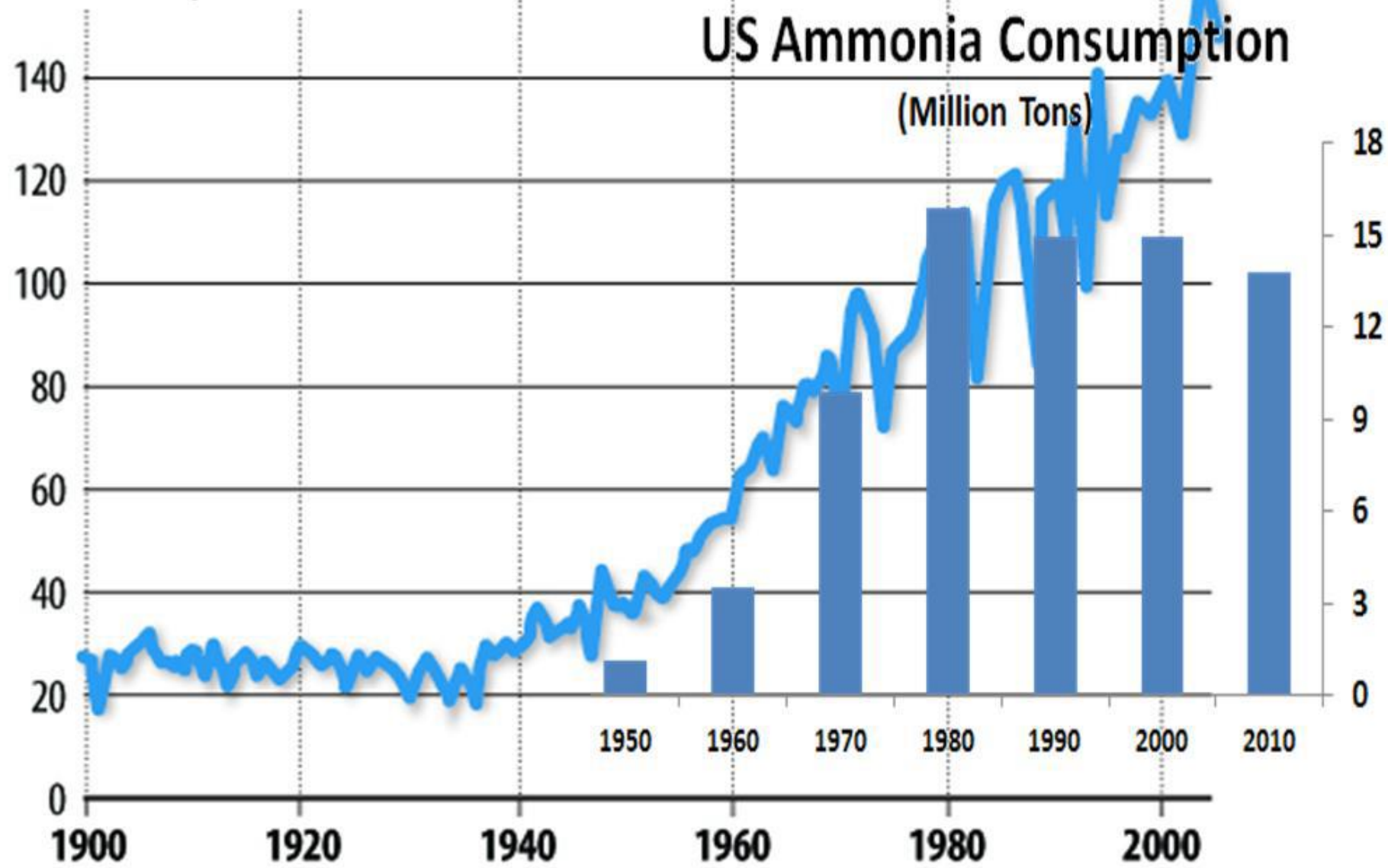
“The Haber process now produces 450 million tons of nitrogen fertilizer per year, mostly in the form of anhydrous ammonia, ammonium nitrate, and urea. Three to five percent of the world's natural gas production is consumed in the Haber process (around 1–2% of the world's energy supply)...

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

U.S. Corn Grain Yields, 1900-2005

YIELD

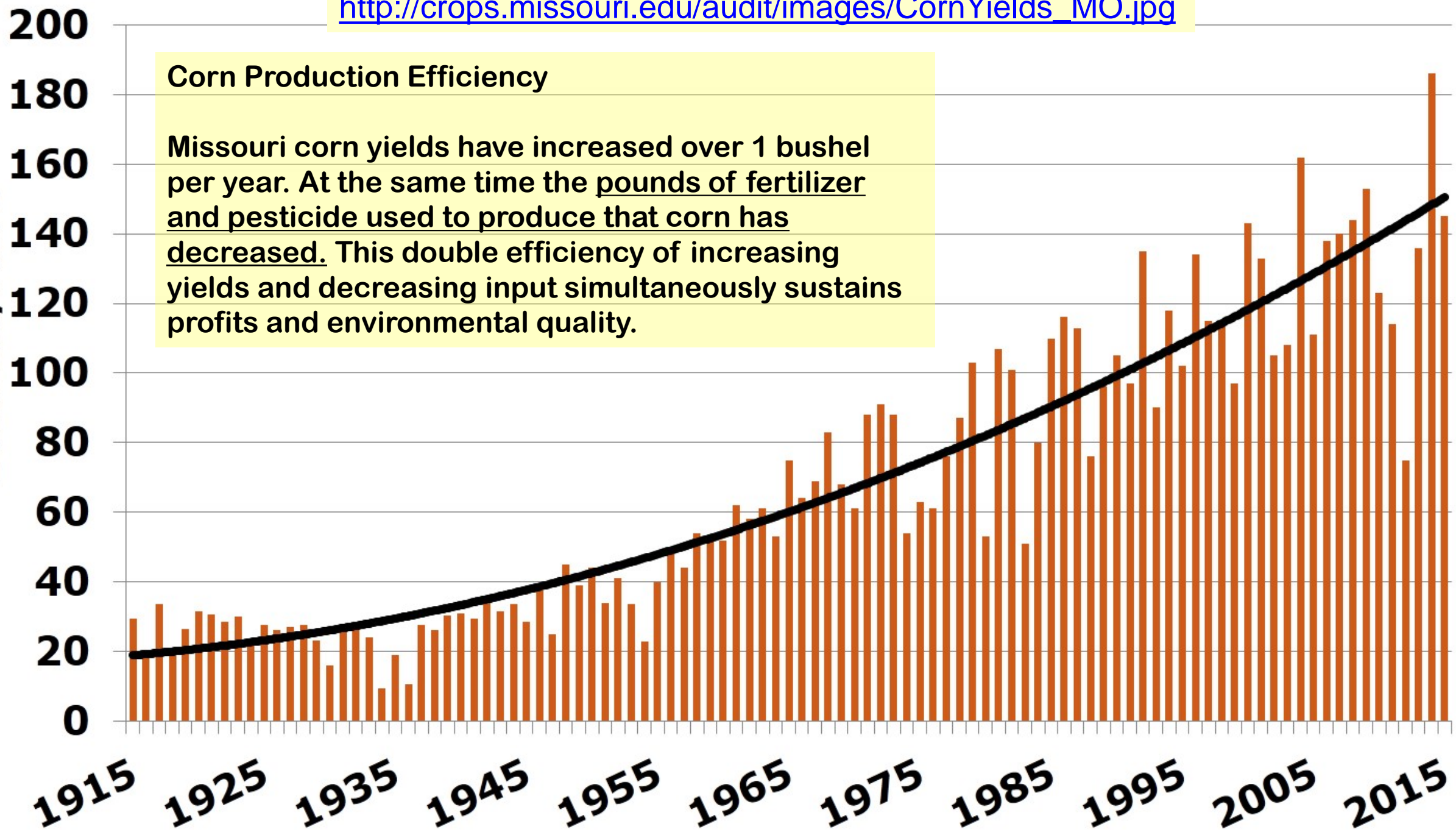
160 Bushels per Acre



Corn Production Efficiency

Missouri corn yields have increased over 1 bushel per year. At the same time the pounds of fertilizer and pesticide used to produce that corn has decreased. This double efficiency of increasing yields and decreasing input simultaneously sustains profits and environmental quality.

Bushels/Acre



Executive Summary

Special Report

Changes in the characteristics of extreme events are particularly important for human safety, infrastructure, agriculture, water quality and quantity, and natural ecosystems. **Heavy rainfall is increasing in intensity and frequency across the United States and globally and is expected to continue to increase.** The largest observed changes in the United States have occurred in the Northeast.

This notion “**Heavy rainfall is increasing in intensity and frequency across the United States and globally and is expected to continue to increase,**” is incorrect, even false.

- We have accurate data from England, sectors from all across England and Wales that show Heavy rain days and heavy rain amounts are NOT increasing.
- The “heavy rain is increasing” comes from improvements in “catch efficiency” of rain gages during the National Weather Service modernization and automation of the 1990s, specifically the adoption of a double shield system, a Tretyakov shield and an 8-foot Alter shield on the All-Weather Precipitation Accumulation Gage.
- Numerous historic records from flood marks on buildings in Europe show that flooding during the Little Ice Age was more extreme than the modest warming in the 20th Century.
- This makes sense from Atmospheric Fluid-Dynamics first principles:
During the LIA the equator-pole temperature gradient was stronger leading to stronger storms
- It makes historic sense. There are numerous instances of catastrophic floods from Western Europe.

This old Forest Service report shows the problem of undercatchment of precipitation during the snow season at the Priest River Experimental Forest, Idaho, 1951, 1952.

Lower Curve A shows unshielded snow accumulation

Curve B Idaho Type II wind shield

Curve C Modified "Alter Type I" shield

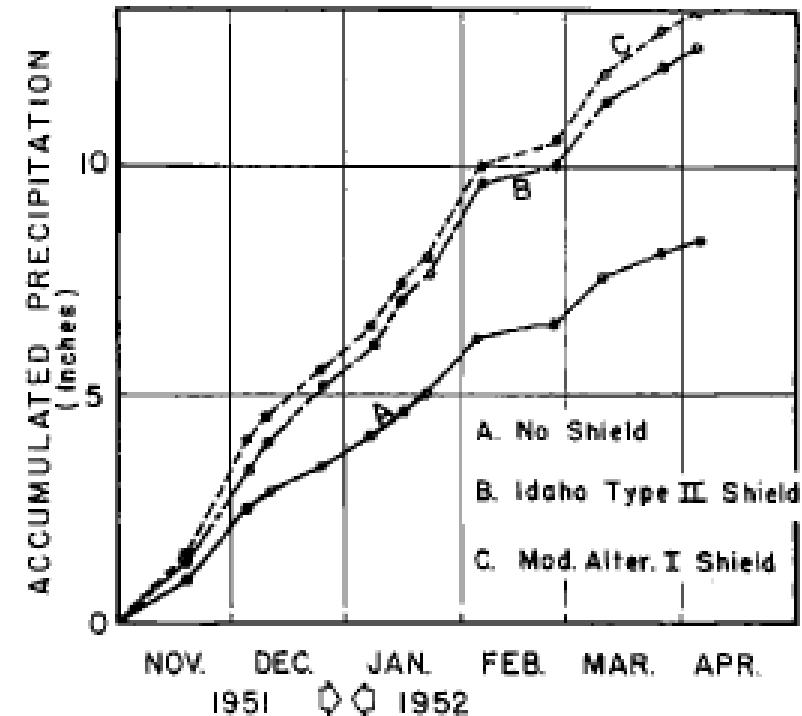


Fig. 12--Comparative winter precipitation catch in experimental U. S. Weather Bureau standard gages at Priest River Experimental Forest, Idaho

Figure 12 gives the comparative performance of three U. S. Weather Bureau standard rain gages located on Gisborne Mountain in the Priest River Experimental Forest. Here is shown the definite value of the windshield. Data on the gage with the modified Alter-I shield indicates the same positive results observed in the wind tunnel. Observations indicate that the Idaho Type II shield becomes frozen up much more quickly than the new shield and probably would cap over on occasions at Gisborne Mountain. Additional field testing is necessary to indicate whether the new shield design will prevent capping over due to formation of rime between the gage and shield.

Numerous intercomparisons were done to achieve improved catch efficiency during R&D.

Winds around the mouth of the standard 8-inch rain gage, below left, resulted in undercatchment.

Below right is an Alter Shield and an 8-inch rain gage.



8-inch unshielded gage in Idaho where some of the intercomparisons were done.



Figure 5 NWS 8-inch Manual Gauge

Figure from SAIC report, "Interim Report For The Winter Test of Production All-Weather Precipitation Accumulation Gauge (AWPAG) Winter 2008-2009"

<http://journals.ametsoc.org/doi/abs/10.1175/15200477%281994%29075%3C0215%3ATAOUSP%3E2.0.CO%3B2>

The Accuracy of United States Precipitation Data

Pavel Ya. Groisman^{*,+}
and David R. Legates[@]

Bulletin of the AMS, Feb, 1994.

Abstract says that errors go from 5% to 40%, worse in winter and in northern states because of strong winter storms (wind and snow effects)

In the West, stations are in the valleys, but much of the terrain is a lot higher, and much of that is in the mountains, and unsampled.

... the HCN and, to a lesser extent, the CDDB are likely the best available sources of historical precipitation data. The question we address here, however, is: Is the absolute accuracy of these data adequate to meet the diverse needs of scientists who use historical precipitation data? We believe that for many applications, the answer is no.

HCN = United States Historical Climatology Network

CDDB = Climate Division Data Base (Part of National Climate Data Center)

Right: Tretyakov Precipitation Gage
at University of Colorado, Boulder



Left: Tretyakov Precipitation Gage
for sale Almaty, Kazakhstan

The ASOS AWPAG in Wikipedia:

All-Weather Precipitation Accumulation
Gage

with Tretyakov Shield

inside

an 8-foot Alter shield



**All Weather Precipitation Accumulation Gauge (AWPAG)
with Double-Structure Wind Shield**



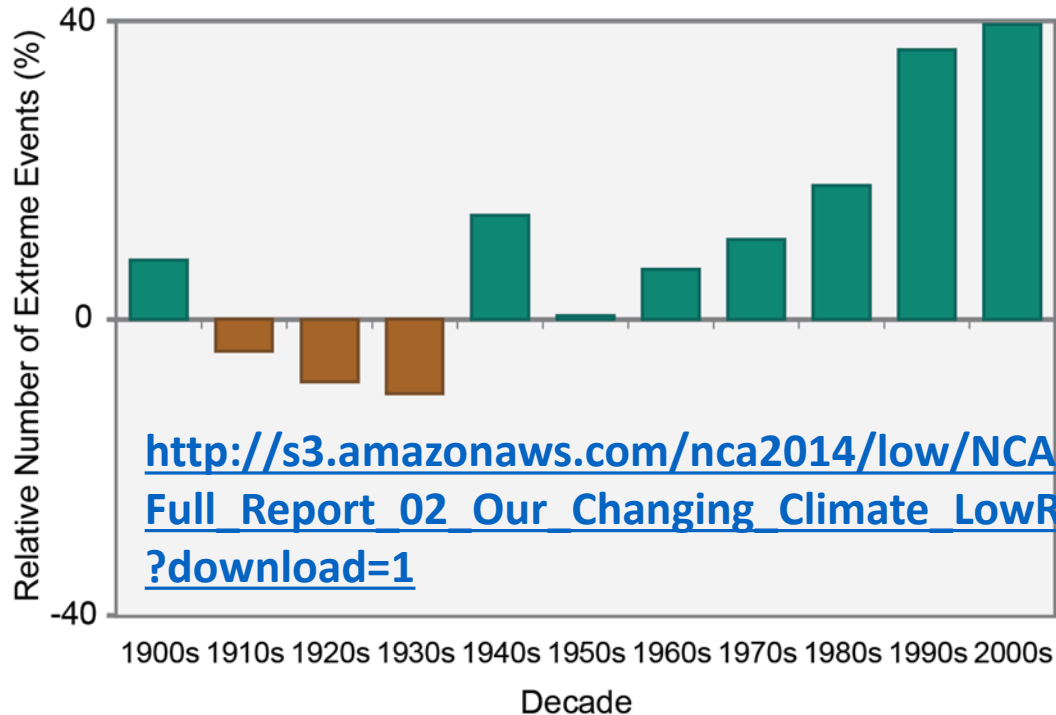
08/14/2008 18:12 NOAA

Let's examine the claim
“Heavy rainfall is increasing in intensity and frequency
across the United States and globally...”

The characteristic is those stunning increases in the
1990s and 2000s.

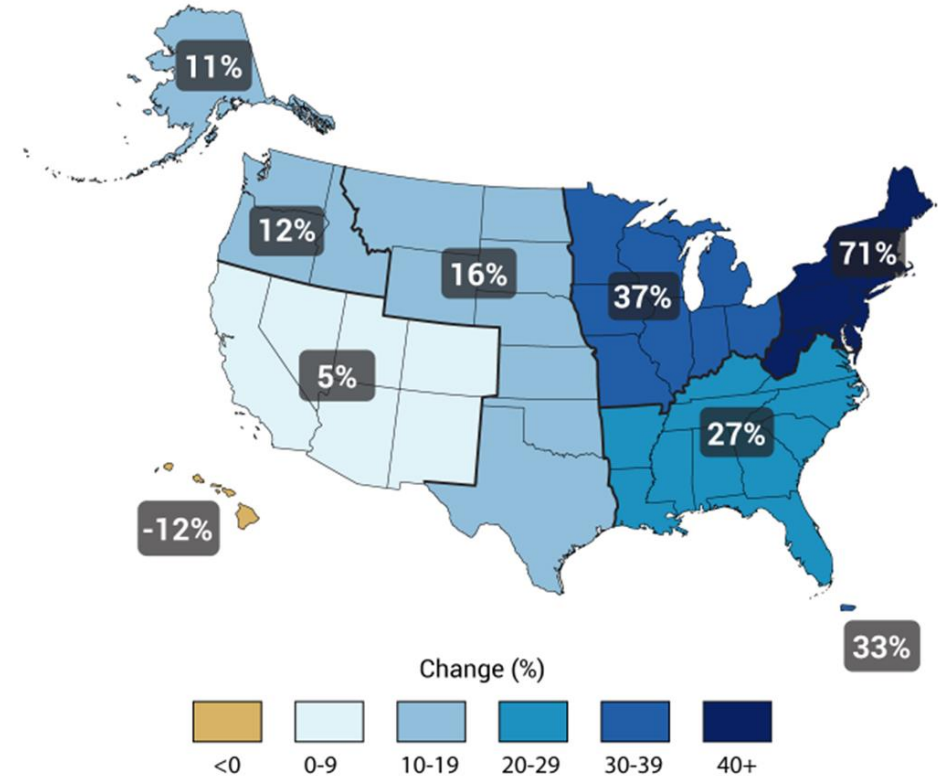
What other measurements confirm this?

Observed U.S. Trend in Heavy Precipitation



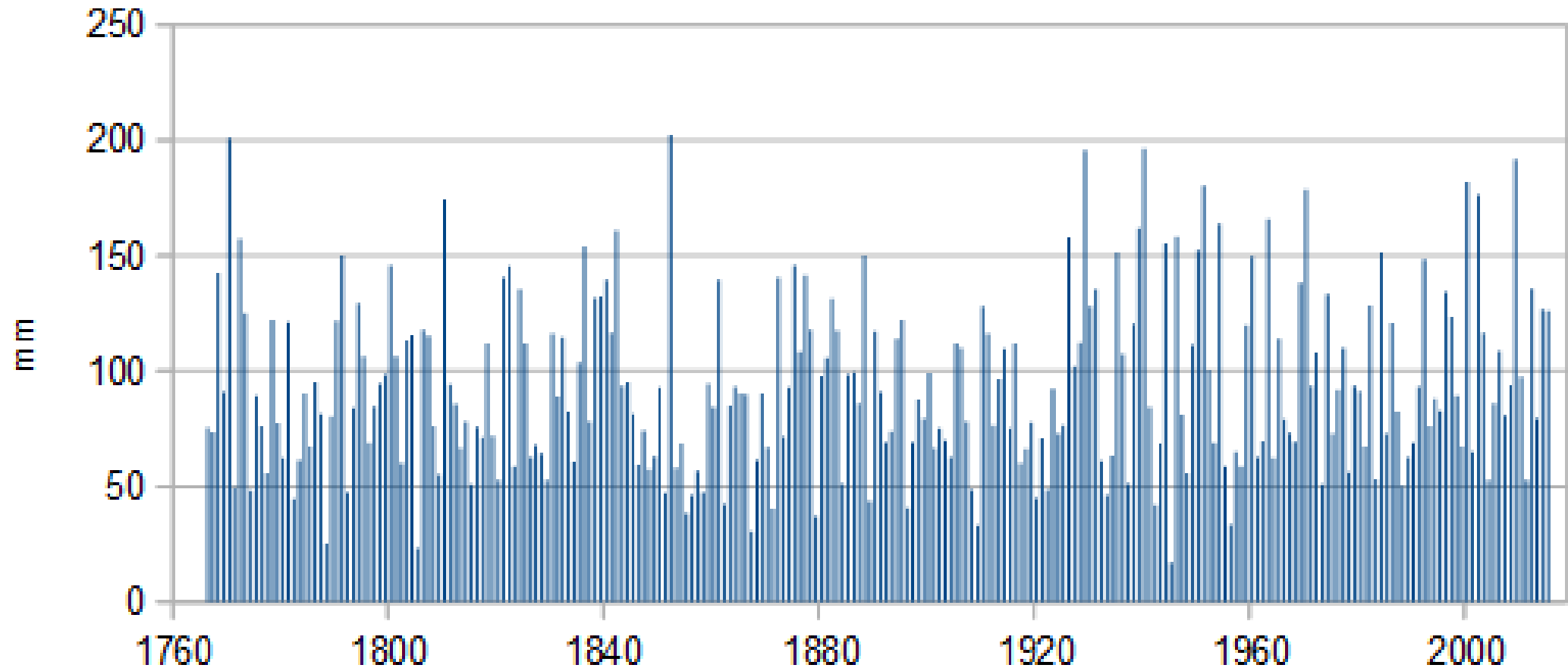
http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_02_Our_Changing_Climate_LowRes.pdf?download=1

Figure 2.18: Observed Change in Very Heavy Precipitation

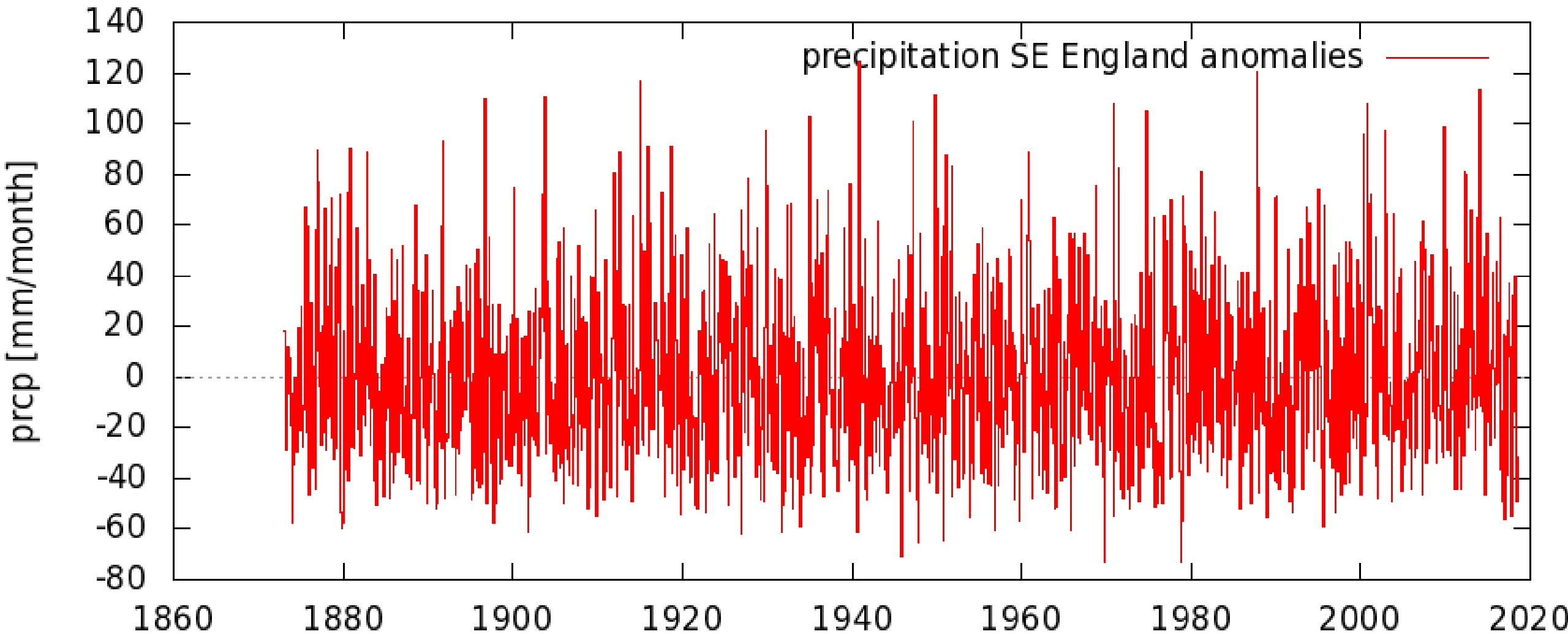


England & Wales Rainfall Series - November Precipitation

1766 to 2015



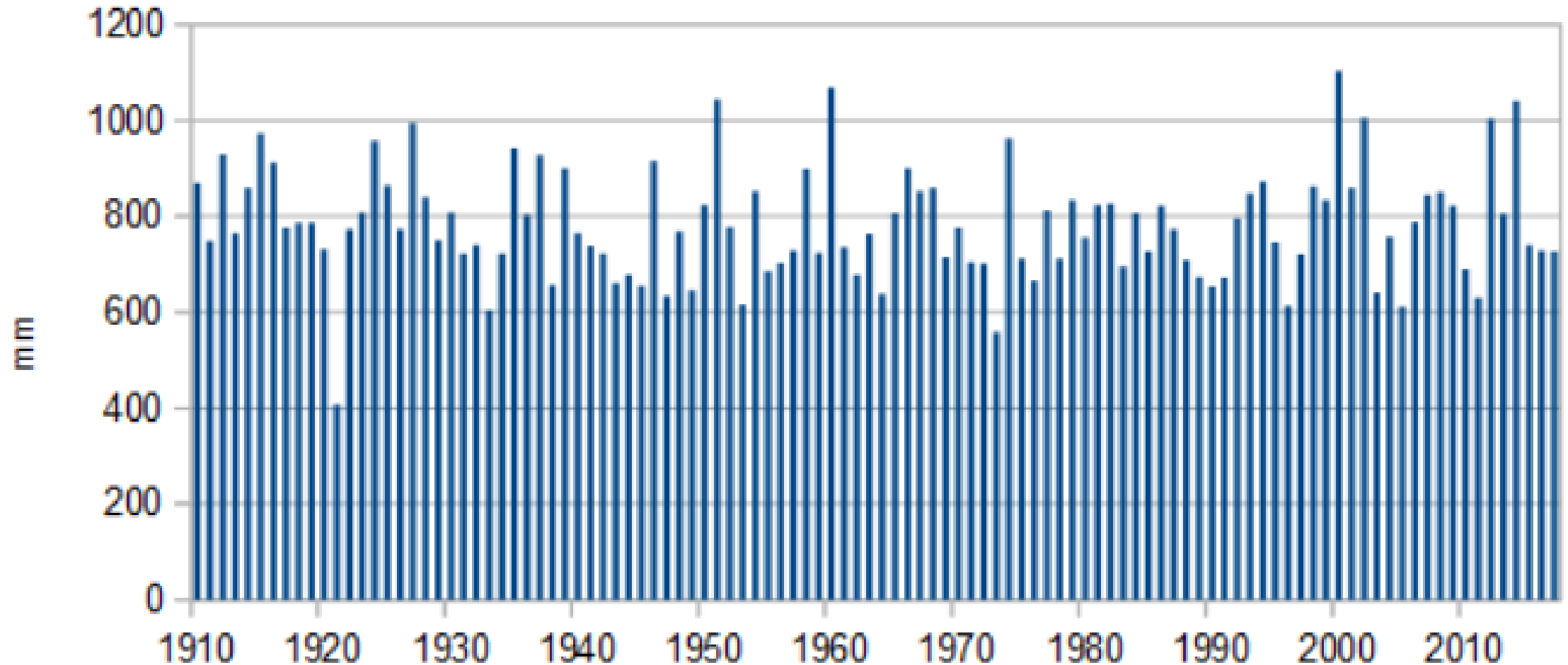
No signature of increasing precipitation in England and Wales, 1990s and beyond, at least not for November



No dramatic increases in precipitation anomalies for SE England or the other charts in this series.

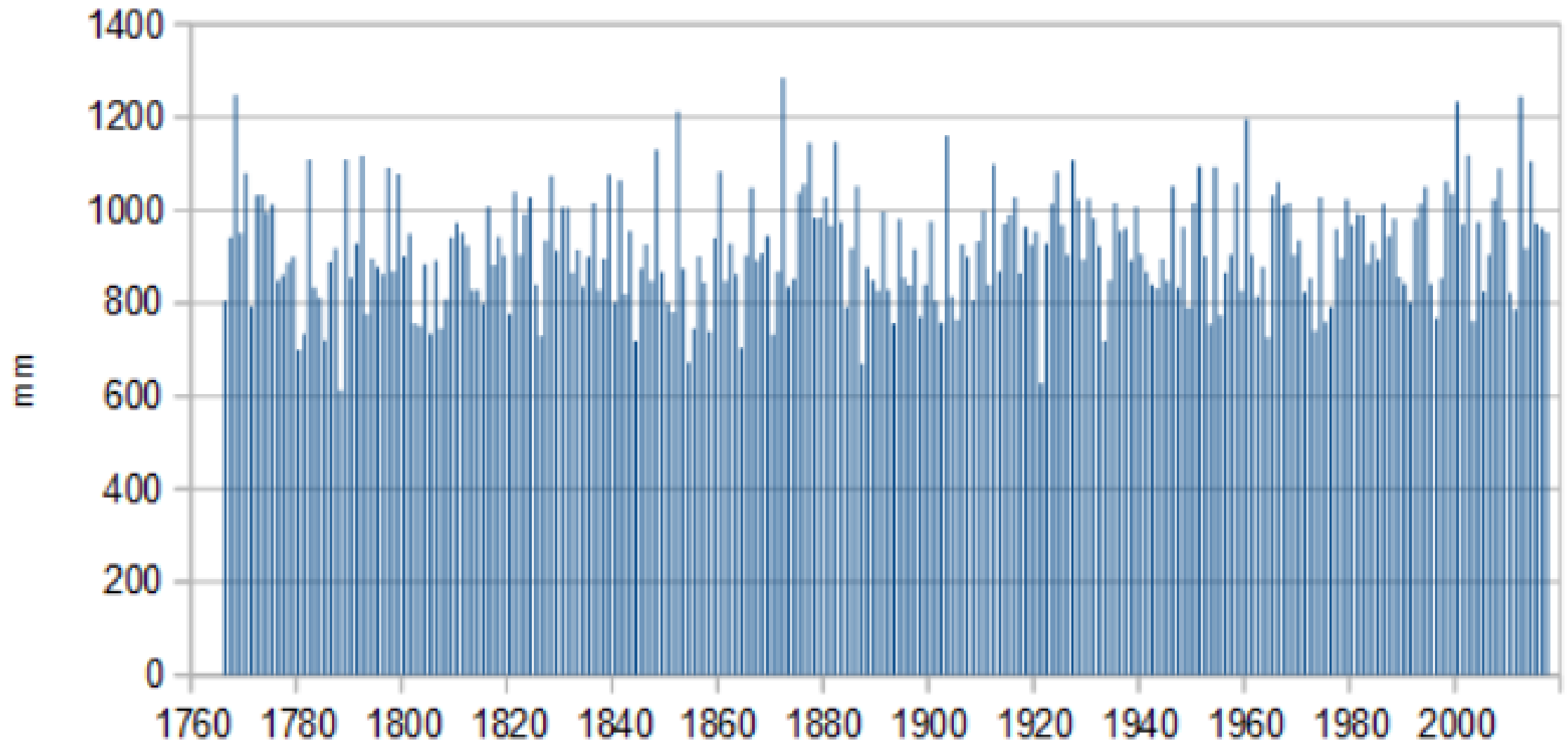
Annual Precipitation - England SE & Central S

1910 to 2017



No dramatic precipitation increases in SE and S Central England (or others in this series)

England & Wales Annual Rainfall 1766 - 2017



No dramatic precipitation increases in England and Wales; this time series goes back to 1766.

Floods are related to heavy rains, and might validate the claims of heavy rain increasing in the 1990s and beyond.

What do flood records show?



High water marks for Bernkastel, Frankfurt, Miltenberg, Passau, and Melk

Frankfurt/Main

Miltenberg

Bernkastel

Passau

Melk

LEGEND

- Country Boundary
- Major Road
- River

- Schönbrunn Palace
- Albertina museum
- Bienna Museum of Art
- Belvedere Palace
- St. Charles's Church
- Vienna S
- Hofburg
- St. Steph
- Museum

**Photo taken in front of Old Town Hall,
Milttenberg, Germany, on the Main River.
High Water mark carved in stone on the Town Hall entranceway.
Highest flood water was February, 1784.**



The catastrophic floods of February 1784 in and around Belgium – a Little Ice Age event of frost, snow, river ice ... and floods

GASTON R. DEMARÉE

Royal Meteorological Institute of Belgium, Ringlaan 3, B-1180 Brussels, Belgium
gaston.demaree@oma.be

ABSTRACT

The winter of 1783/84 is known to have been severe and long-lasting in a number of European countries. Two very cold spells occurred: at the end of December 1783 and in January 1784. Furthermore, it snowed heavily in the months of December 1783, January and February 1784. On 21 February 1784, a warm southerly wind led to a thaw which resulted in fast breaking-up of the ice on the frozen rivers and to catastrophic floods. This large-scale and long-lasting event took place in the present-day Belgium, The Netherlands, Luxemburg, northern France, Germany, Austria, and the Czech and Slovak Republics. The above-mentioned event is studied for Belgium and for adjacent areas of its hydrological river basins. Emphasis is given to the hydrological phenomena, but these are, of course, strongly linked to the weather of that particular winter. Therefore, instrumental and non-instrumental climatological observations are presented and their relation to the floods is given. The main narrative data consist of two meteorological manuscripts of the Library of the Royal Observatory of Belgium that have never been used heretofore. The instrumental meteorological observations of the Mannheim Ephemerides series at Brussels, the Godart series at Verviers and Baron de Poederlé's observations at Brussels are used. These narrative and instrumental meteorological data are further documented by quotations from a large number of contemporaneous authors and newspapers.

Underlining Added

INTRODUCTION

The Little Ice Age (LIA) is a collective term originally coined by glaciologists for the period of glacial advances in the course of the last millennium (Grove, 1988).

***“The catastrophic floods of February 1784 in and around Belgium
A Little Ice Age event of Frost, Snow, River Ice...and Floods”***

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Uncertainties about its time of initiation and termination still exist, but it is generally accepted that, for Europe, the LIA may have started about 1500 and lasted until the end of the 19th century or earlier (Brázdil et al., 2005b).

Therefore, the harsh and long lasting winter of 1783/84 was considered by the author as a typical LIA event.

Kington (1980) noted that high climatic variability on the month-to-month scale and the year-to-year variations were much more marked than in the 20th century.

Several summers were drier and several winters colder in the 1780s than at present.

Furthermore, a pronounced maximum of blocked weather systems occurred during the early winter period, indicating an early start to cold season continental conditions, a characteristic of the LIA period.

This says just the opposite of what NCA4 says

The disastrous floods concern large parts of Western and Central Europe, among them the Seine, Somme, Loire, Scheldt, Meuse, Rhine, Mosel, Saar, Main, Neckar, Danube, Weser, Elbe [Labe], Vltava [Moldau], Ohře, and Oder River basins (Glaser, HISKLID; Militzer, CLIMDAT®; Weikinn, 2000; Brázdil et al., 2005a). Hennig (1904) describes the winter of 1783/84 as being very cold from 23 December 1783 to 24 February 1784 in the whole of Europe, with an uncommon, deep low pressure area on 18 January, and, from 28 February to 2 March, floods in Germany and Bohemia of an extent previously unknown. In London, in February 1784, the Thames was frozen and traffic crossed on the ice (Kington, 1980), while navigation was affected for much longer periods.

Emphasis Added.

According to the observations by Antonín Strnad at the Klementinum in Prague, the winter of 1783/84 was very severe and snowy. A sudden thaw associated with a warm southern wind and precipitation on 24 February made the snow melt, broke up the ice on the rivers, and caused the hitherto largest winter flood on the Vltava [Moldau] River in Prague on 27–29 February 1784 (Brázdil et al., 2003, 2004, 2005). On the Labe [Elbe] River and its tributaries, the ice broke up and caused floods in Bohemia, the Czech Republic and in Saxony, Germany (Elleder & Munzar, 2004; Munzar et al., 2005). Glaser and Hagedorn studied in detail the weather conditions and the catastrophic floods in the Main River valley, Germany. Severe damage was noted to bridges, mills, ... but also the people living in the flooded areas suffered serious damage through loss of property and goods (Glaser & Hagedorn, 1990; Glaser, 2001).

Emphasis Added

**High Water marks
Bernkastel, Germany
on the Mosel River**

**There are three sets of High
Water Marks here.**

**<Red Arrow> says
“28 2 1784 mit Eisgang”**

Translation for Americans:

Feb 28, 1784, was the date.

**The water was full of ice
when the Mosel flooded here.**



<http://floodlist.com/dealing-with-floods/flood-high-water-marks>



High water marks on the Eiserner Steg bridge in Frankfurt. "Vom Eise befreit sind Strom und Bäche" is from Goethe. Photo from 2005. Photo credit: D Weekly @ flickr



Hochwasser in German means high water.

This is a monument of high water marks measured at Melk, Austria.

This slide will mean a lot more after we get to the next slide.







High Water Marks
found in Passau,
Germany, on the
Danube.

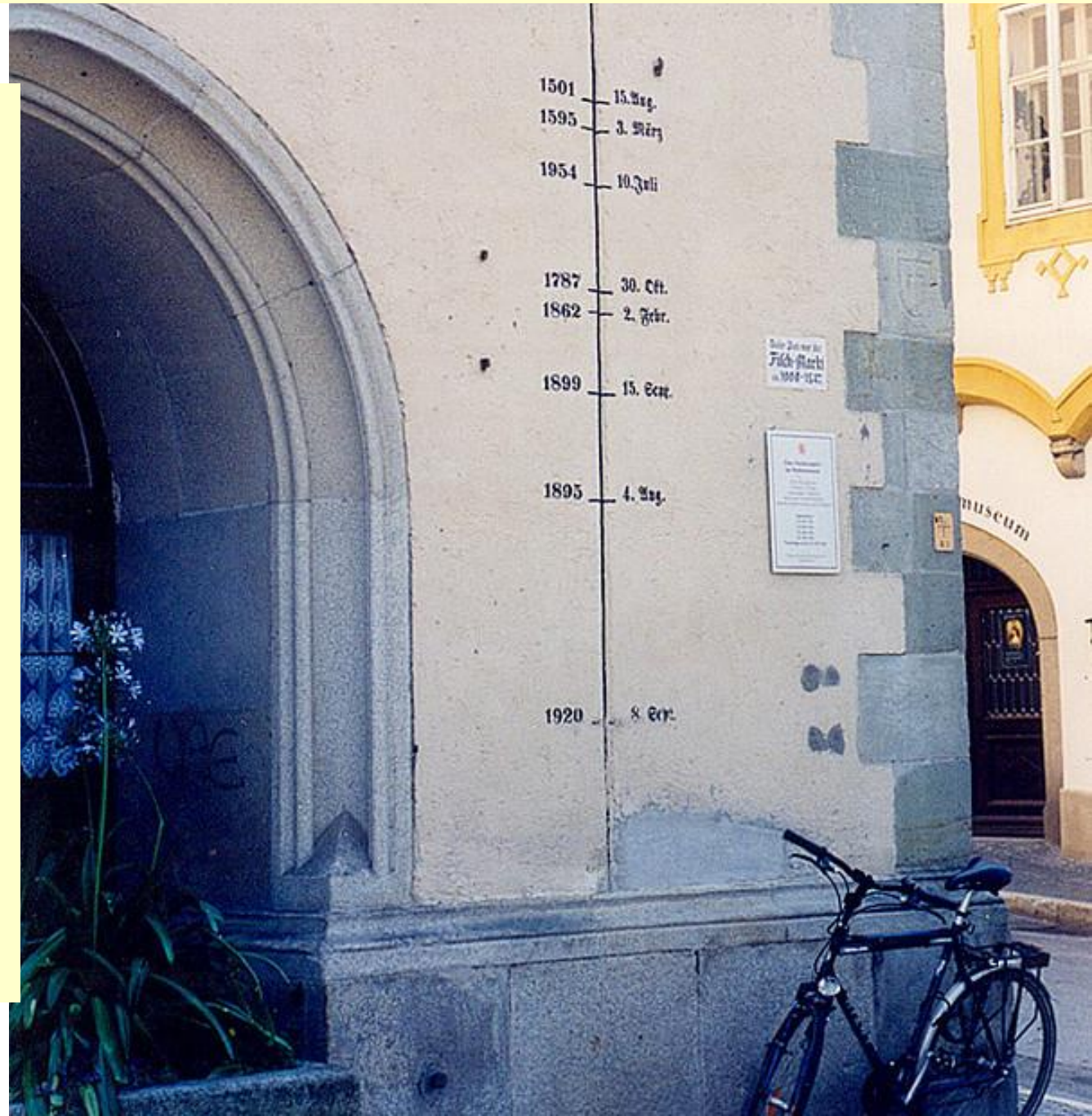
Three rivers come
together
at Passau:

From the South: INN

From the North: ILZ

Highest flood is in
1501

Second Highest
1595



What are the dates of these high water marks in Germany and Austria?

Bernkastel on the Mosel High Water 28 Feb 1784

Miltenberg on the Main High Water Feb 1784

Frankfurt on the Main High Water 1682 2d highest, 1784

Passau, on the Danube High Water 1501

Melk, on the Danube High Water 1501 2d highest, 1784

All of these dates, 1784, 1784, 1501, and 1501 occurred in the Little Ice Age

Strength of storms depends on baroclinicity of the atmosphere, i.e.,
the difference in temperature between pole and equator.

Historical and present experience cast extreme doubt on the popular Alarmist Claim: Warmer = More Floods

This is the record book for record precipitation in the US.

There are no records set in the 1990s and later.

The 24 hour record was set in 1979.

1-minute, 1956

5-minute, 1960

[Extreme Weather:
A Guide & Record
Book –
Christopher C. Burt
– Google Books](#)

U.S. Record Point Rainfalls

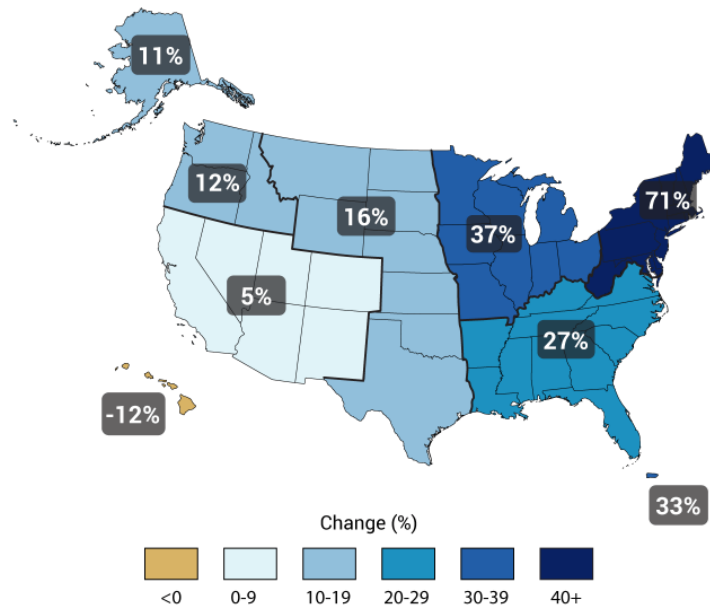
<i>Time</i>	<i>Rainfall</i>	<i>Location</i>	<i>Date</i>
1 minute	1.23"	Unionville, MD	7/4/1956
5 minutes	2.03"	Alamogordo Creek, NM	6/5/1960
12 minutes	2.30"	Embarrass, WI	5/28/1881
15 minutes	3.95"	Galveston, TX	6/4/1871
30 minutes	7.00"	Cambridge, OH	7/16/1914
40 minutes	9.25"	Guinea, VA	8/24/1906
42 minutes	12.00"	Holt, MO	6/22/1947*
1 hour	13.80"	Central WV	5/4-5/1943
1 hour 30 minutes	14.60"	Central WV	5/4-5/1943
2 hours	15.00"	Woodward Ranch, (D'Hanis) TX	5/31/1935
2 hours 30 minutes	19.00"	Rockport, WV	7/18/1889
2 hours 45 minutes	22.00"	Woodward Ranch, (D'Hanis) TX	5/31/1935*
3 hours	28.50" est.	Smethport, PA	7/18/42*
4 hours 30 minutes	30.70"	Smethport, PA	7/18/42*
12 hours	34.30"	Smethport, PA	7/17-18/1942
18 hours	36.40"	Thrall, TX	9/9/1921
24 hours	43.00"	Alvin, TX	7/25-26/1979
4 days	62.00"	Kukaiau, Hamakua, HI	2/27-3/2/1902
8 days	82.00"	Kukaiau, Hamakua, HI	2/27-3/6/1902
1 month	148.83"	Mt. Waialeale, Kauai, HI	3/1982
1 month (mainland)	71.54"	Helen Mine, CA	1/1909
1 year	704.83"	Kukui, Kauai, HI	1982
1 year	332.29"	MacLeeod Harbor, AK	1976
1 year (mainland)	204.12"	Laurel Mountain, OR	1996

*constitutes a world record

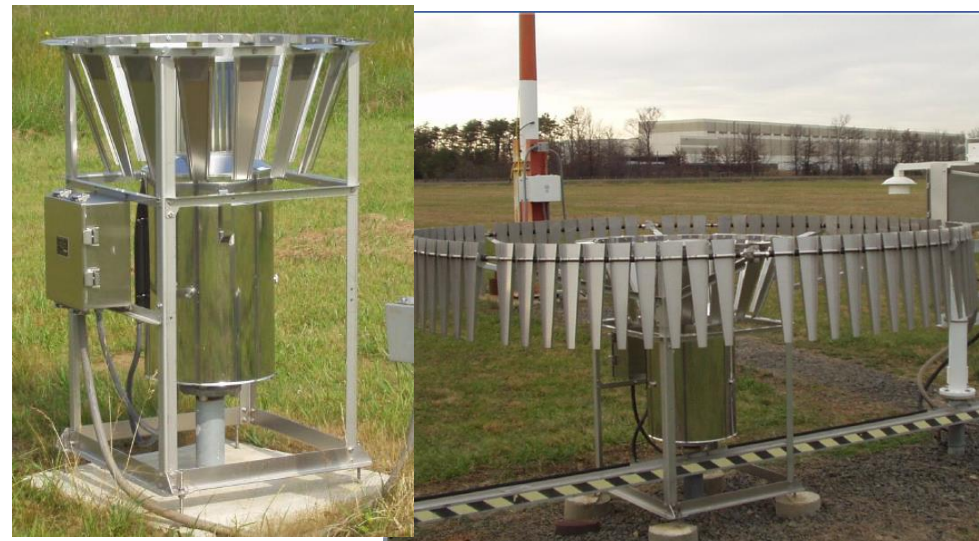
We now know that these precipitation increases are real, but they are artifacts of improved collection of precipitation with dual-shielded ASOS gages, not changing weather or climate.

None of the NCA claims are validated with data.

Figure 2.18: Observed Change in Very Heavy Precipitation



Observed U.S. Trend in Heavy Precipitation



<https://www.youtube.com/watch?v=k6GnBbIS4UE>

Tour archeologico de Ostia Antica (first 1:50)

