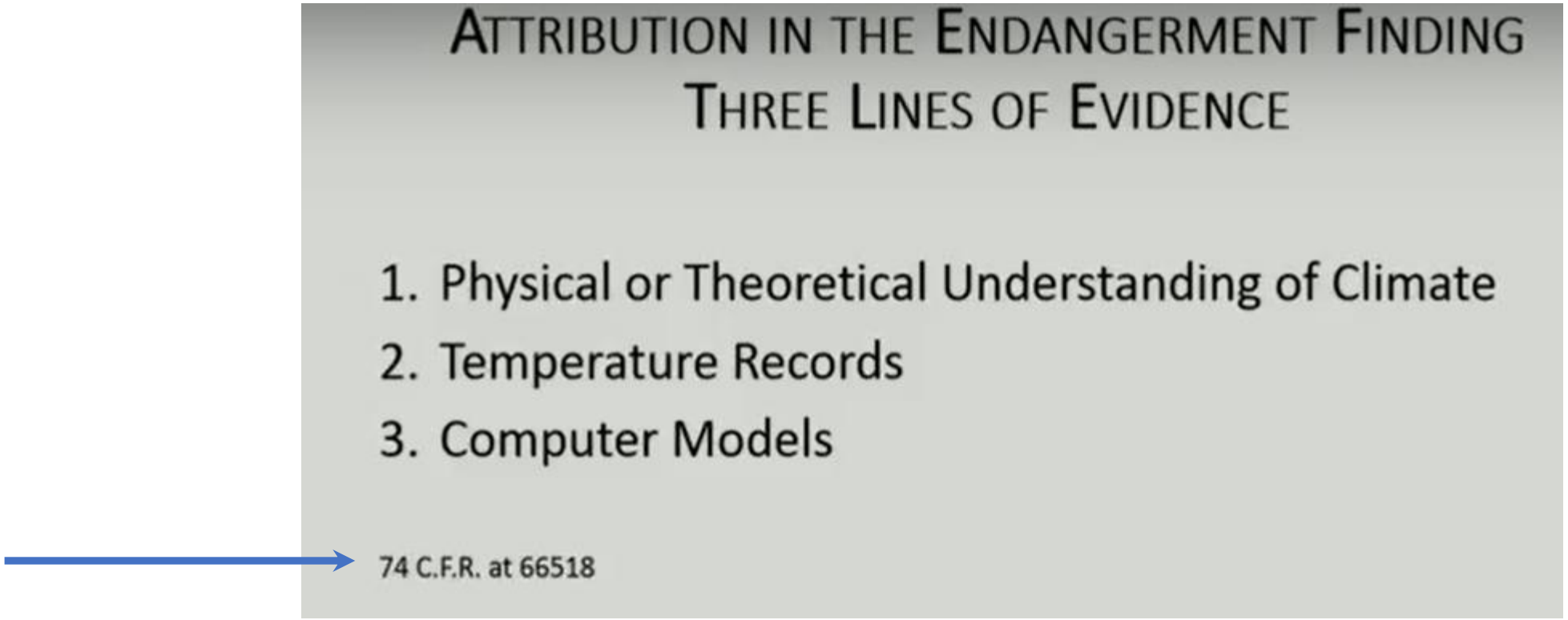
# Scientific Grounds:
# The Obama-era EPA declaration of CO2- fueled endangerment of the climate is fundamentally wrong.

Details are on the web site:

https://casf.me/pdf_the-scientific-grounds-for-reconsidering-epas-co2-endangerment-finding-_21_-april_2018/

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

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 precipitation and the frequency of heavy precipitation events have increased. 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

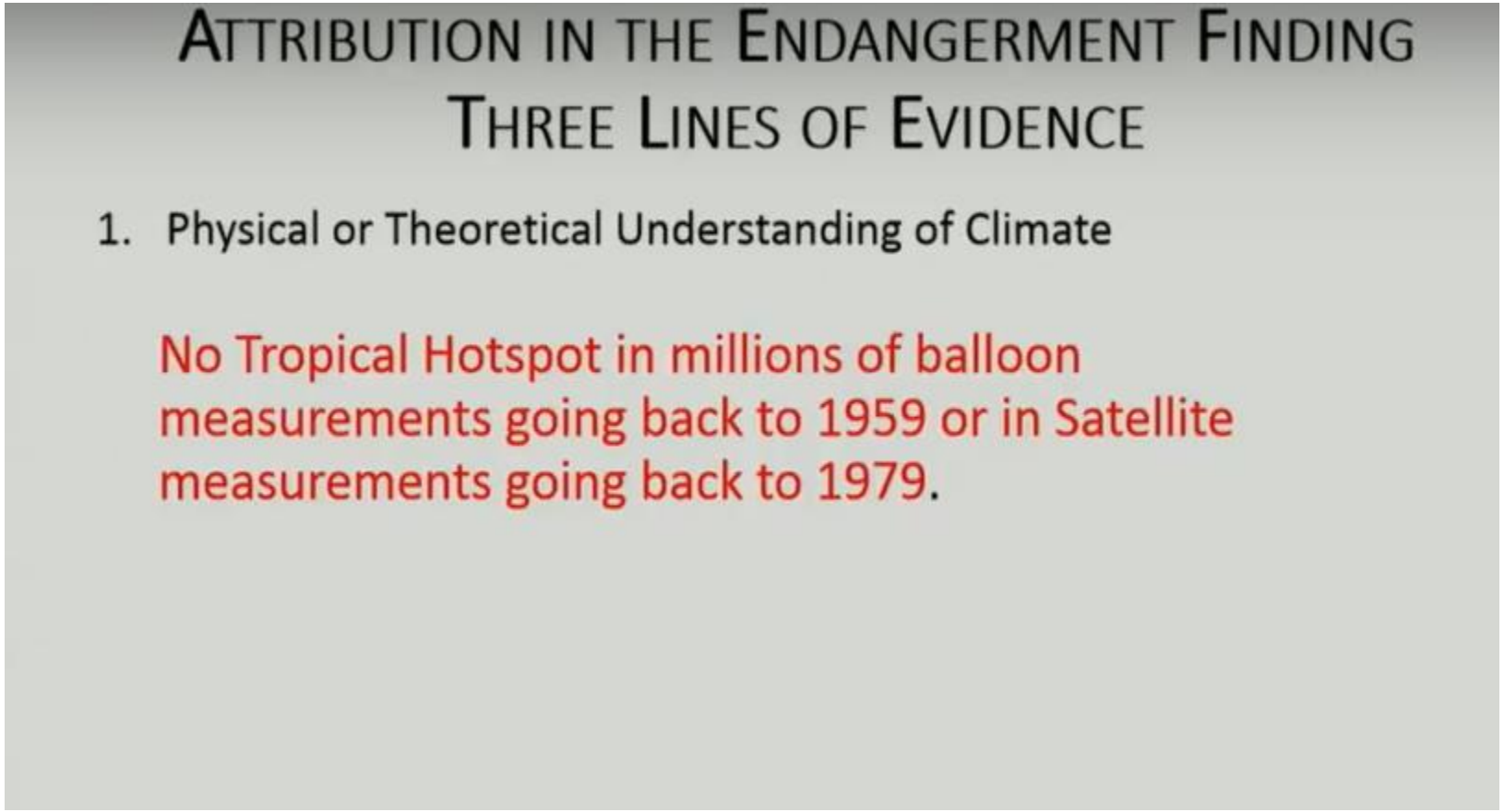
"The **attribution** of observed climate change to anthropogenic activities **is based on multiple lines of evidence**.

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)." <Paragraphing, **bolding**, added>

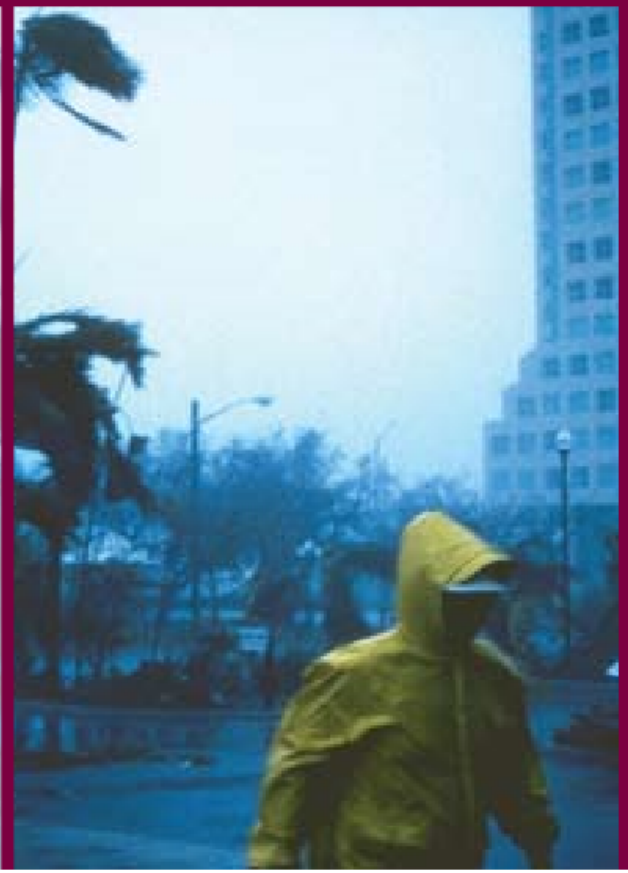
# 1. Physical or Theoretical Understanding of Climate



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?

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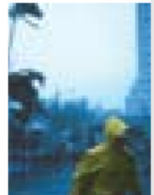
**from NOAA's Geophysical Fluid Dynamics Laboratory in Princeton, N.J.**



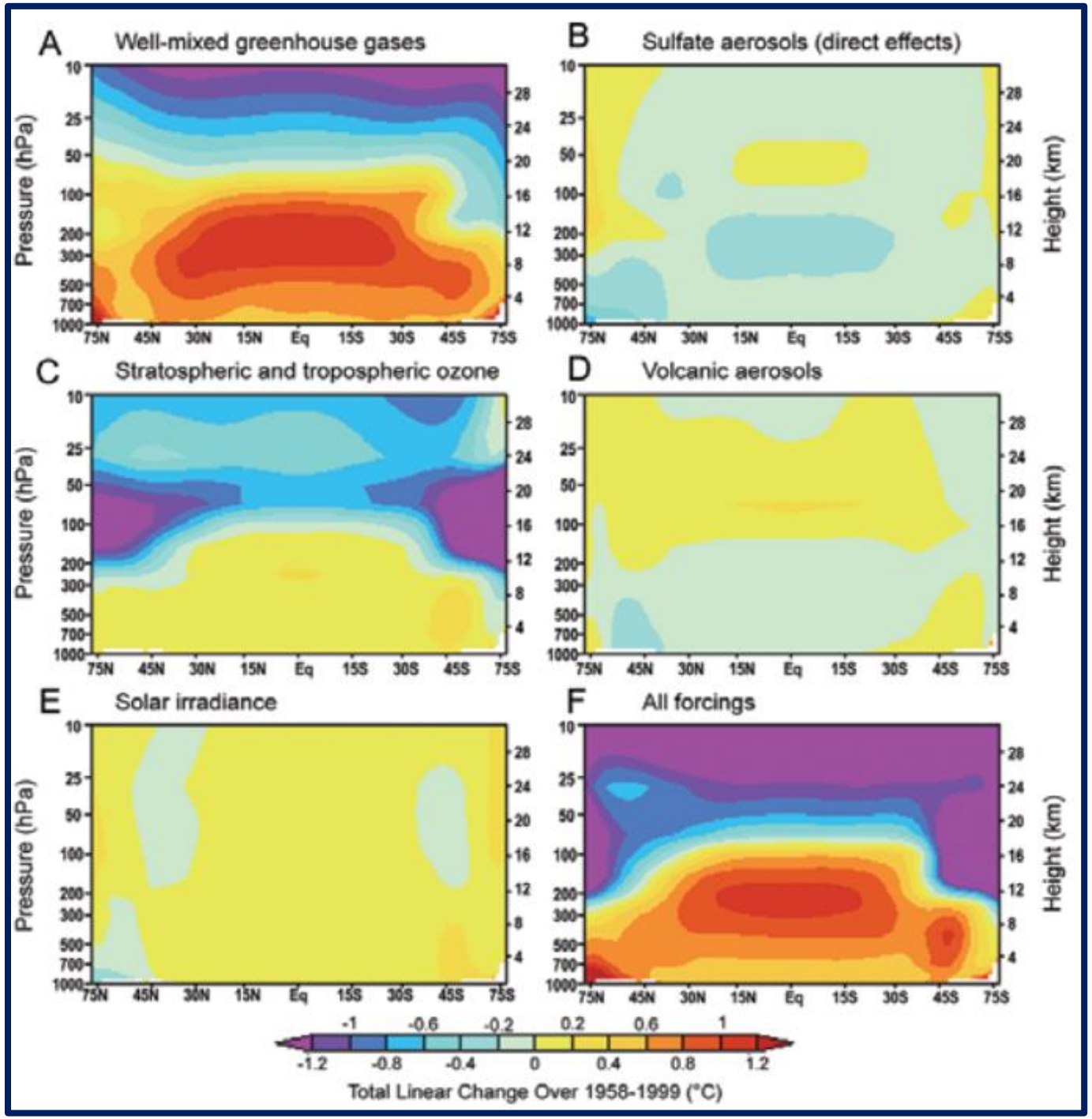
## SUMMARY

The U.S. Climate Change Science Program

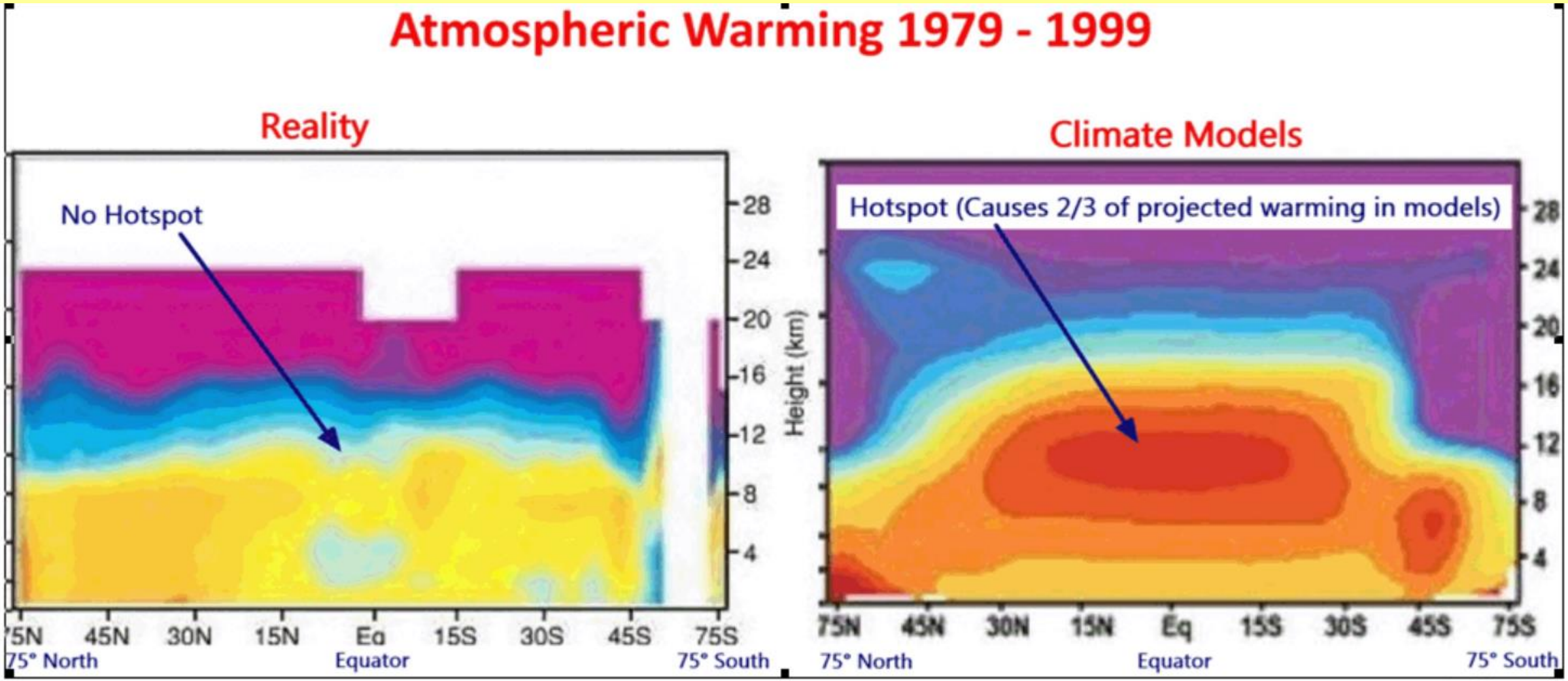
This is from NOAA's Geophysical Fluid Dynamics Laboratory (GFDL)

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)



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




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

# 2. Temperature Records

https://thsresearch.files.wordpress.com/2017/05/chap3-published-in-elsevier.pdf

Uncorrupted temperature records contain natural cycles.

Temperature Record containing natural cycles

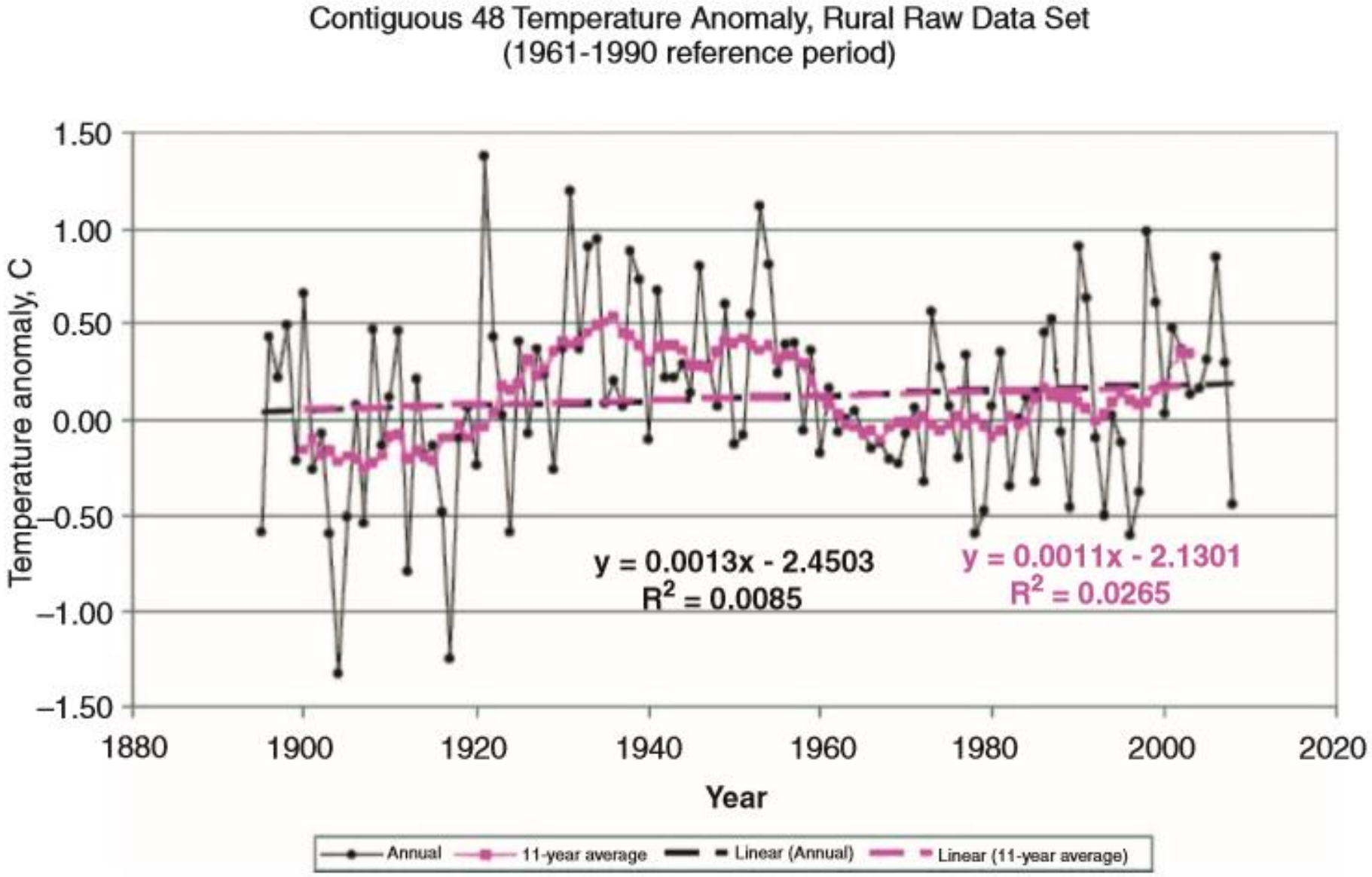
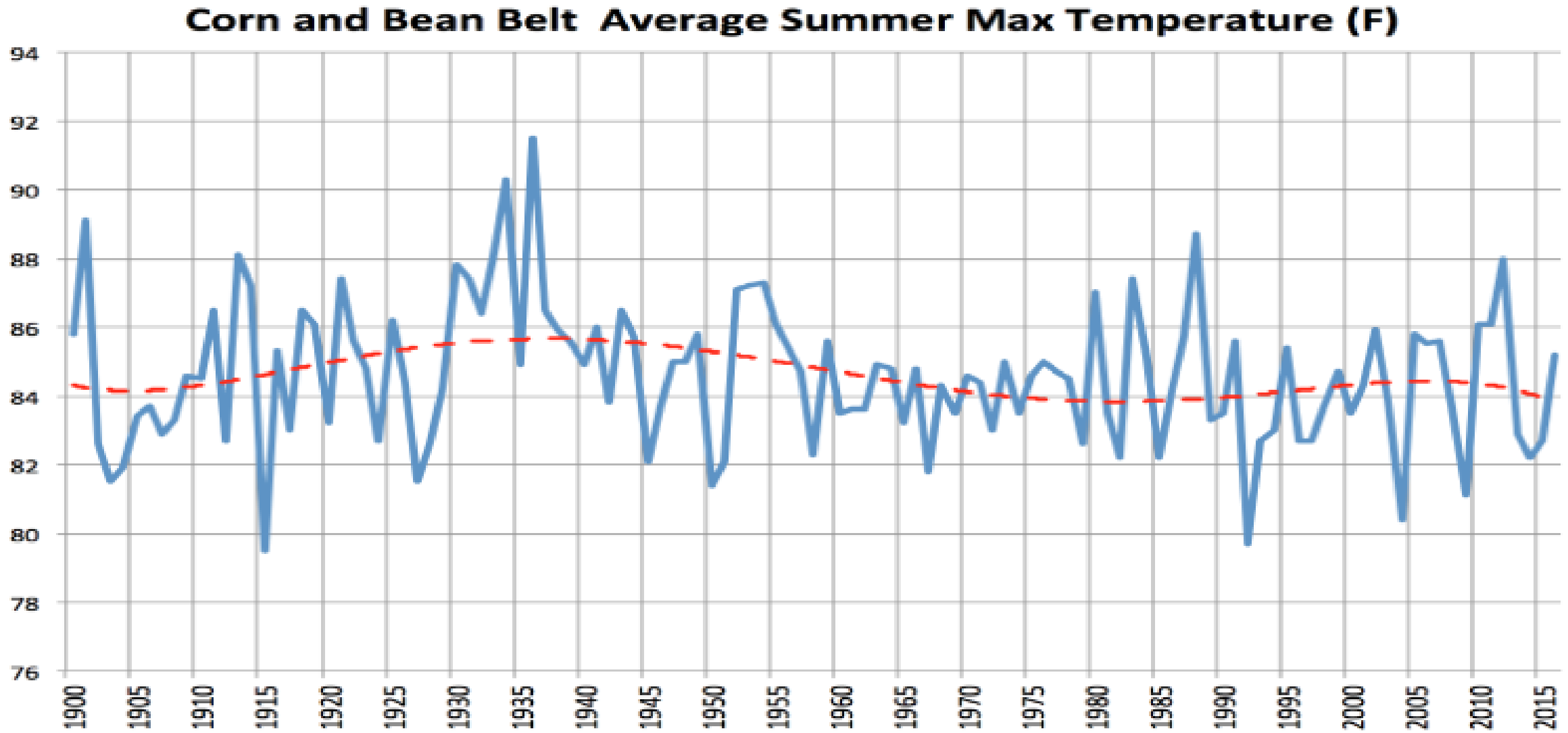



**FIGURE 28** Edward long analysis of rural raw stations for the lower 48 states, USHCN version 2. Note the very small trend 0.12 °C/century in this data set and at the significant peak in the 1930s.

Natural cycles in the USA's Corn and Bean Belt

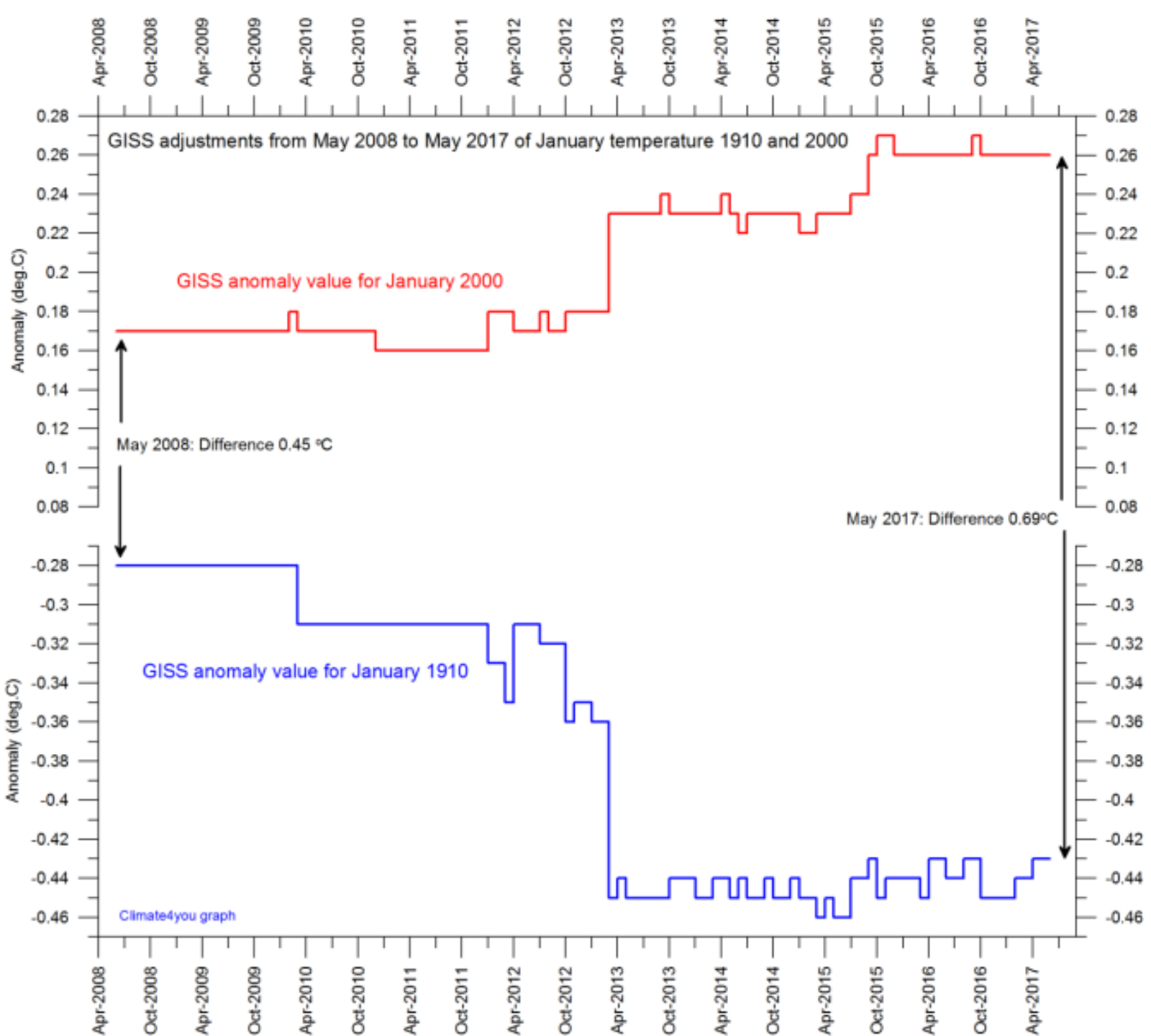
# Figure V-7




Source: NOAA Climate at a Glance

Adjustments made over time by

NASA GISS



http://www.climate4you.com/Text/Climate4you_April_2017.pdf

Adjustments made over time by

NASA GISS

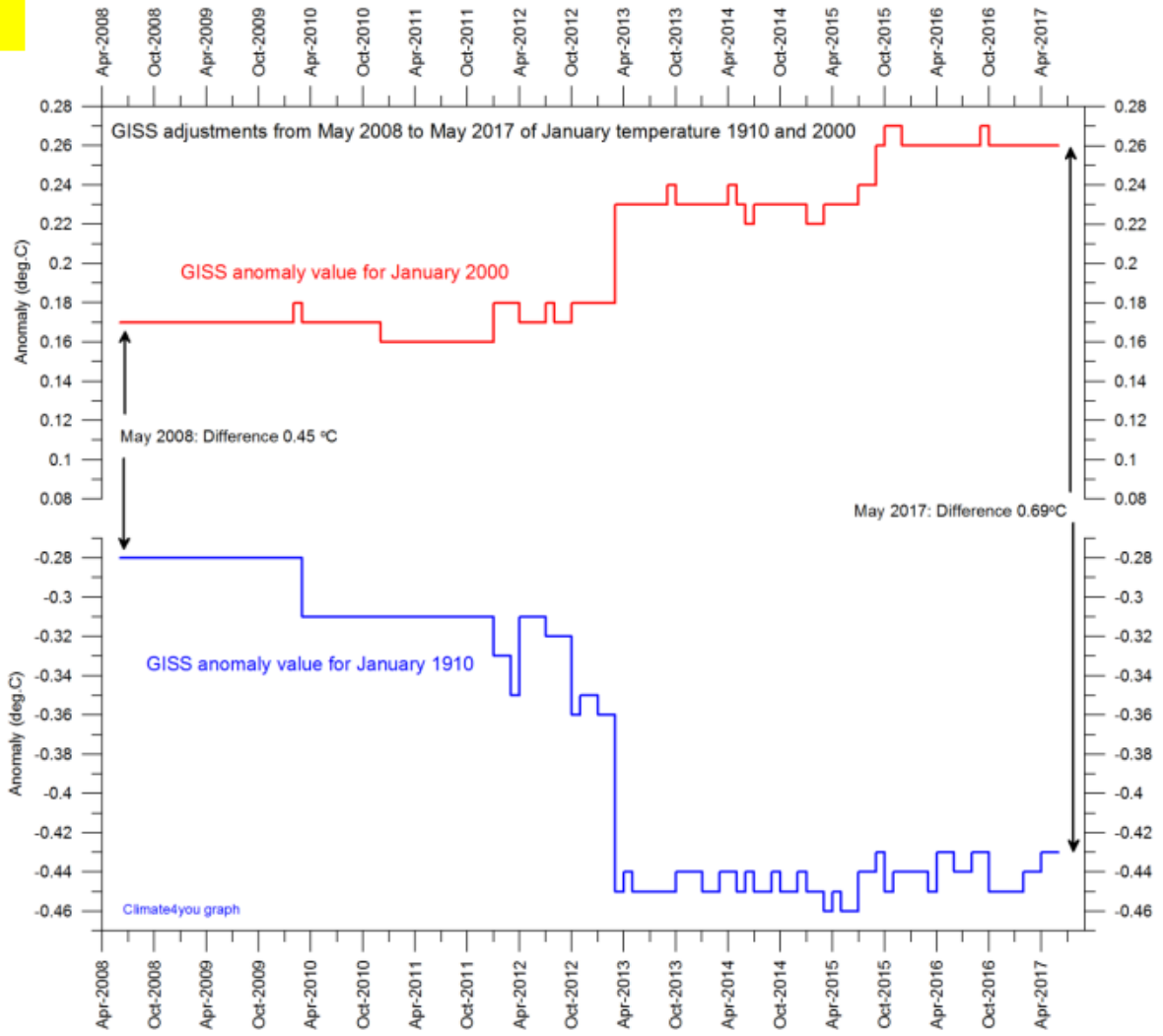



*Diagram showing the adjustment made since May 2008 by the Goddard Institute for Space Studies (GISS), USA, in anomaly values for the months January 1910 and January 2000.*



Note: The administrative upsurge of the temperature increase from January 1915 to January 2000 has grown from 0.45 (reported May 2008) to 0.69C (reported May 2017). This represents an about 53% administrative temperature increase over this period, meaning that more than half of the reported (by GISS) global temperature increase from January 1910 to January 2000 is due to administrative changes of the original data since May 2008.

https://thsresearch.files.wordpress.com/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!

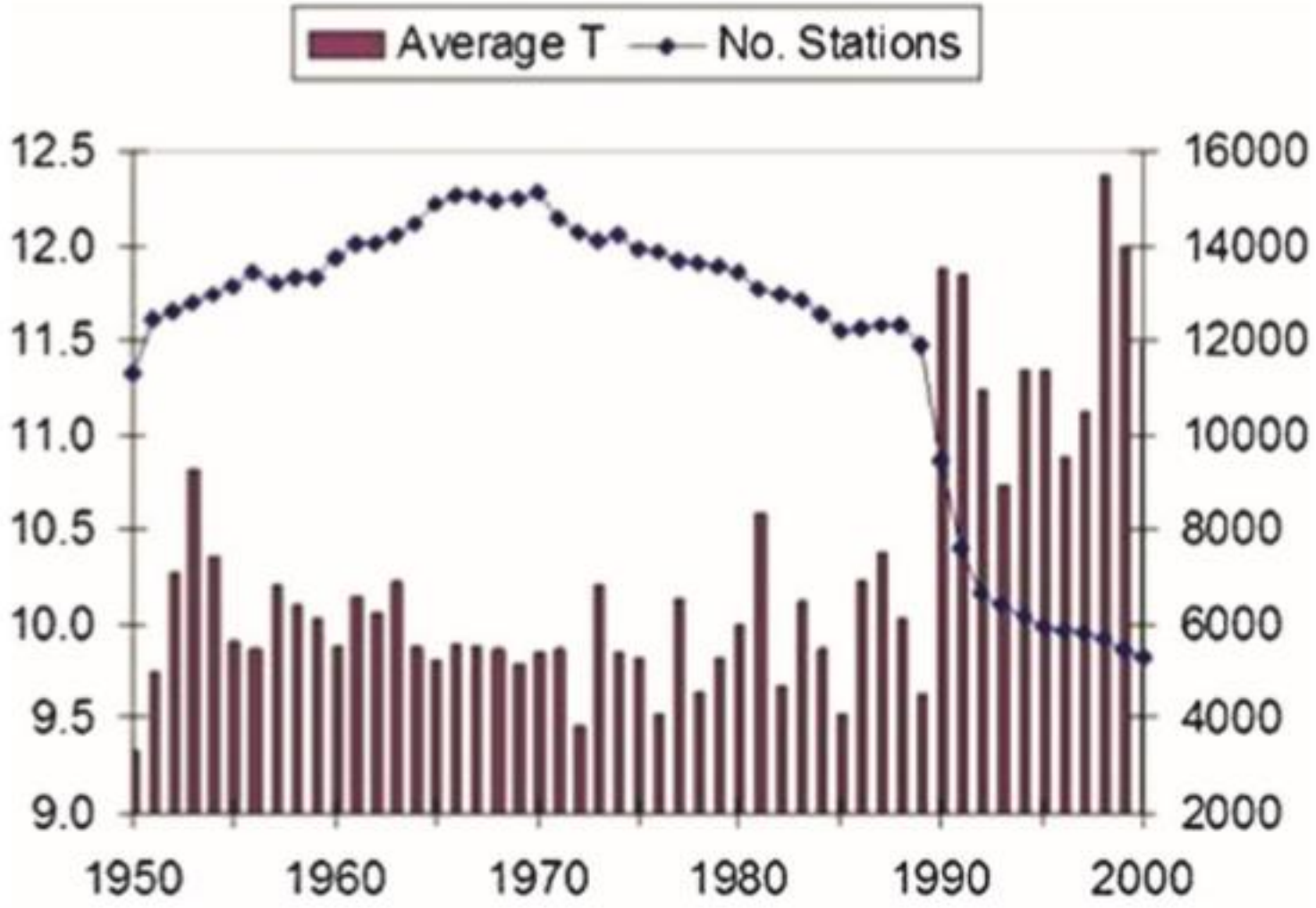
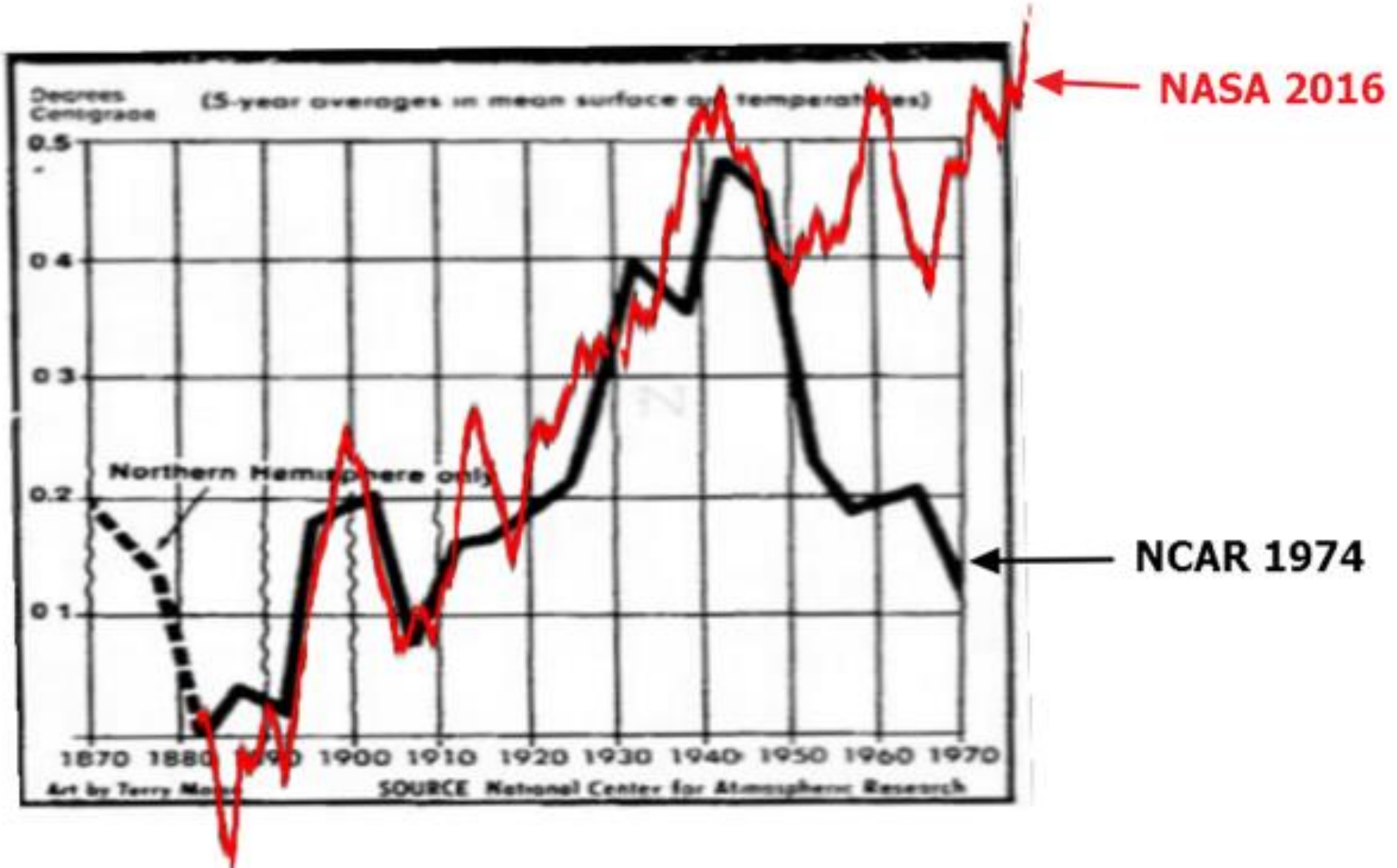



FIGURE 5 Plot of the number of total station ID's in each year since 1950 and the average temperatures of the stations in the given year.

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

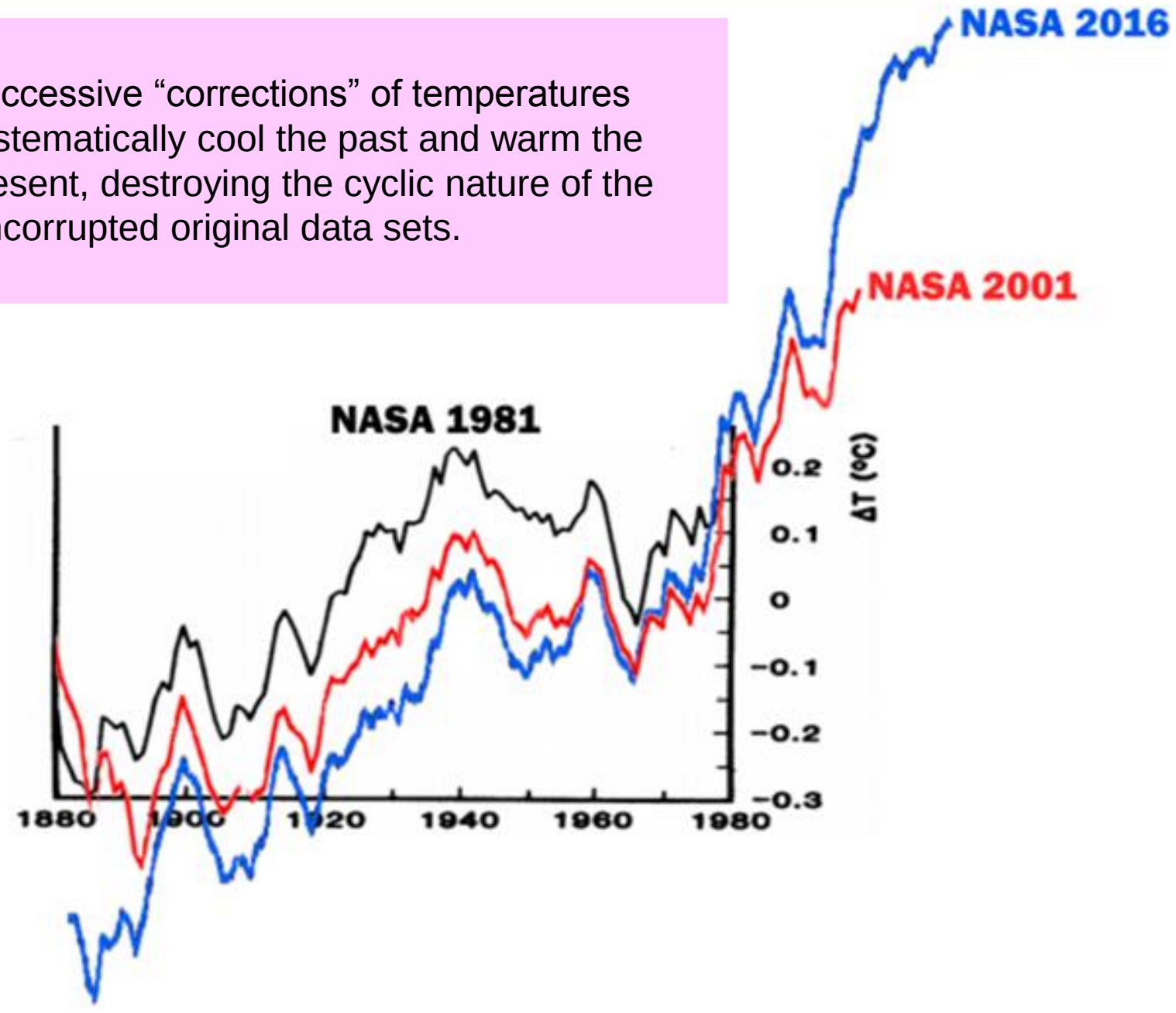
**BLACK trace shows the "tooth-shaped" temperatures published by NCAR in 1974, during the "Global Cooling" scare of the 1970s**

**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

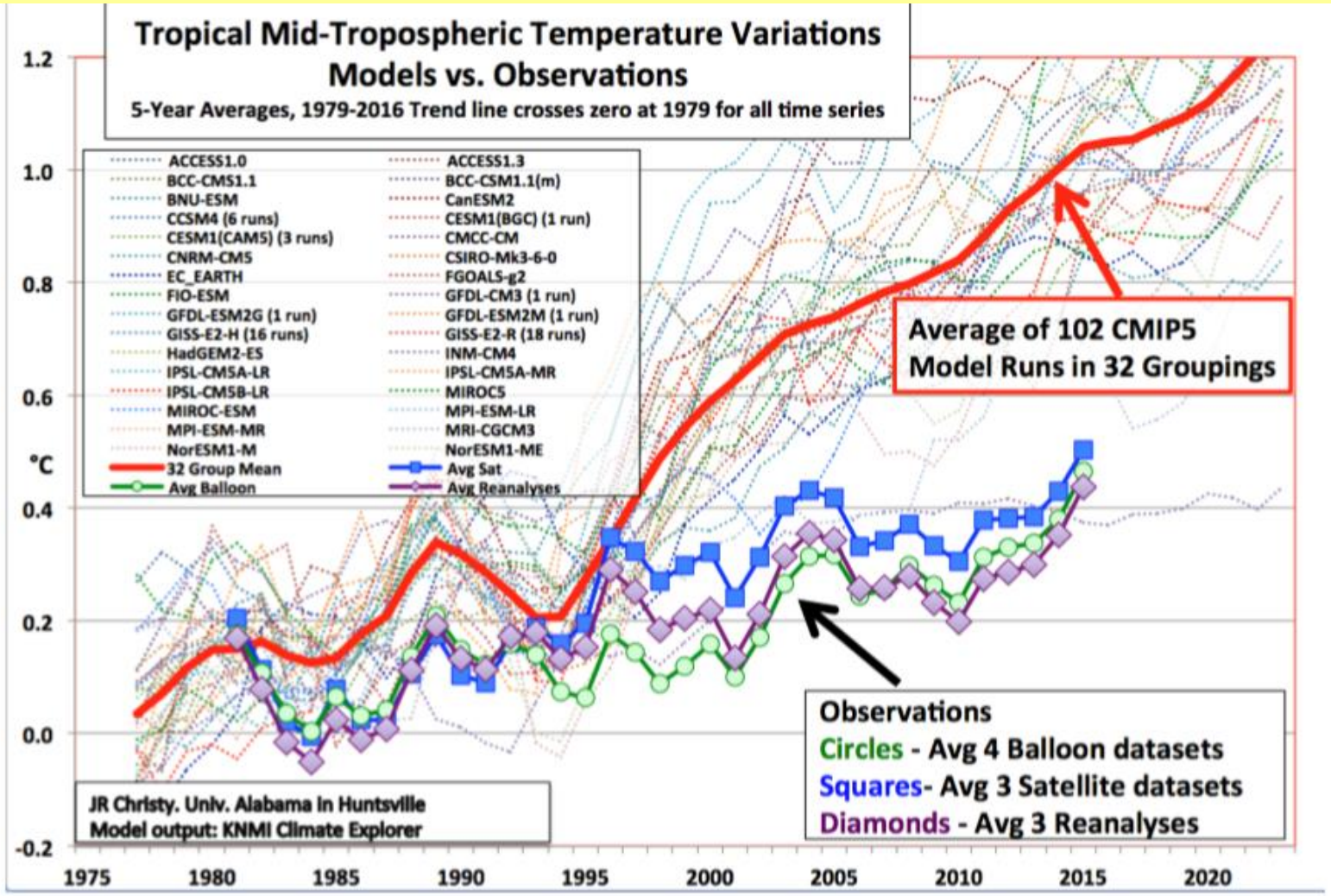
All Models show the Hot Spot, which does not exist in nature.

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.

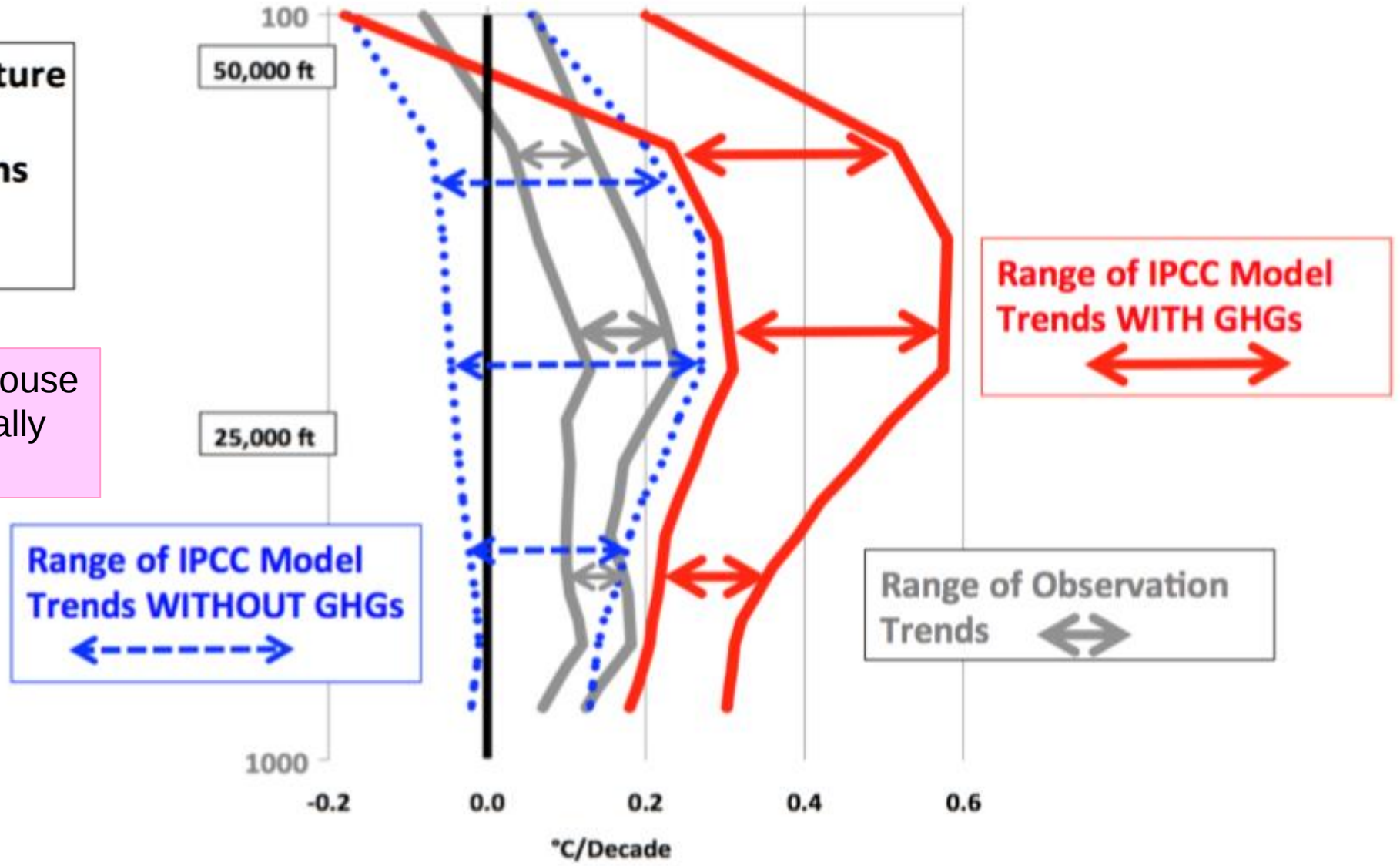



Five-year averaged values of annual mean (1979-2016) tropical bulk TMT as depicted by the average of 102 IPCC CMIP5 climate models (red) in 32 institutional groups (dotted lines). The 1979-2016 linear trend of all time series intersects at zero in 1979. Observations are displayed with symbols: Green 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.




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.