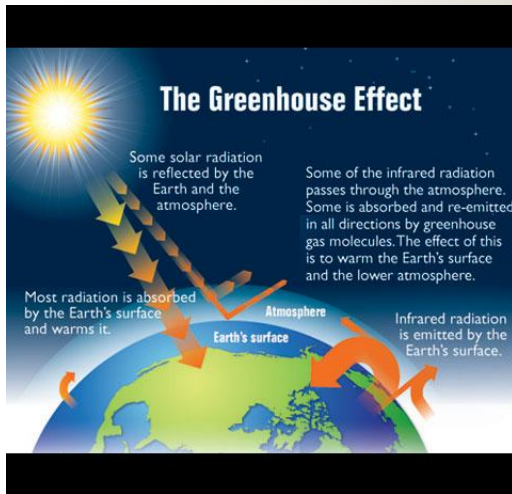
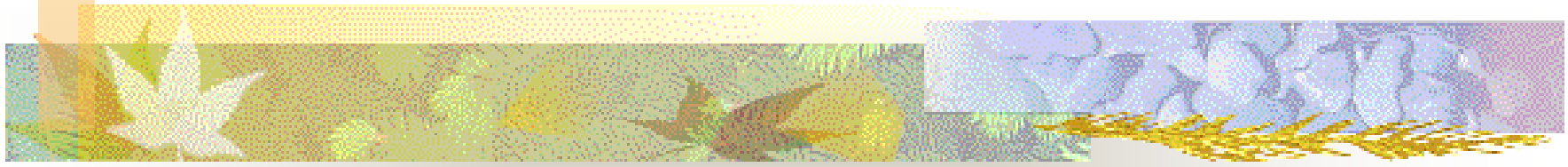


What About Global Warming? Real? Causes? Mitigation?

Dr. Heinz Lycklama

heinz@osta.com

www.heinzlycklama.com/messages



What About Global Warming?

- The Global Warming (**GW**)/**CC** Claims
- Climate Change (**CC**) Models
- Historical Global Temperature Anomalies
- Greenhouse Effect
- Greenhouse Gases
- **UN IPCC** (Intergovernmental Panel on **CC**)
- Paris Climate Agreement
- Possible Causes of **GW**
- **NIPCC** (**Nongovernmental** International Panel on **CC**)
- History of **CC** in Greenland (11 Minute video)
- Conclusions



NIPCC
Nongovernmental International Panel on Climate Change

CO₂ SCIENCE THE HEARTLAND INSTITUTE

Biblical Mandates

- Be fruitful and multiply and fill the earth and subdue it, and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth. **Gen. 1:28**
- While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease. **Gen. 8:22**
- But test everything; hold fast what is good. **1 Th. 5:21**





The GW Claims

■ Promoted by the UN IPCC

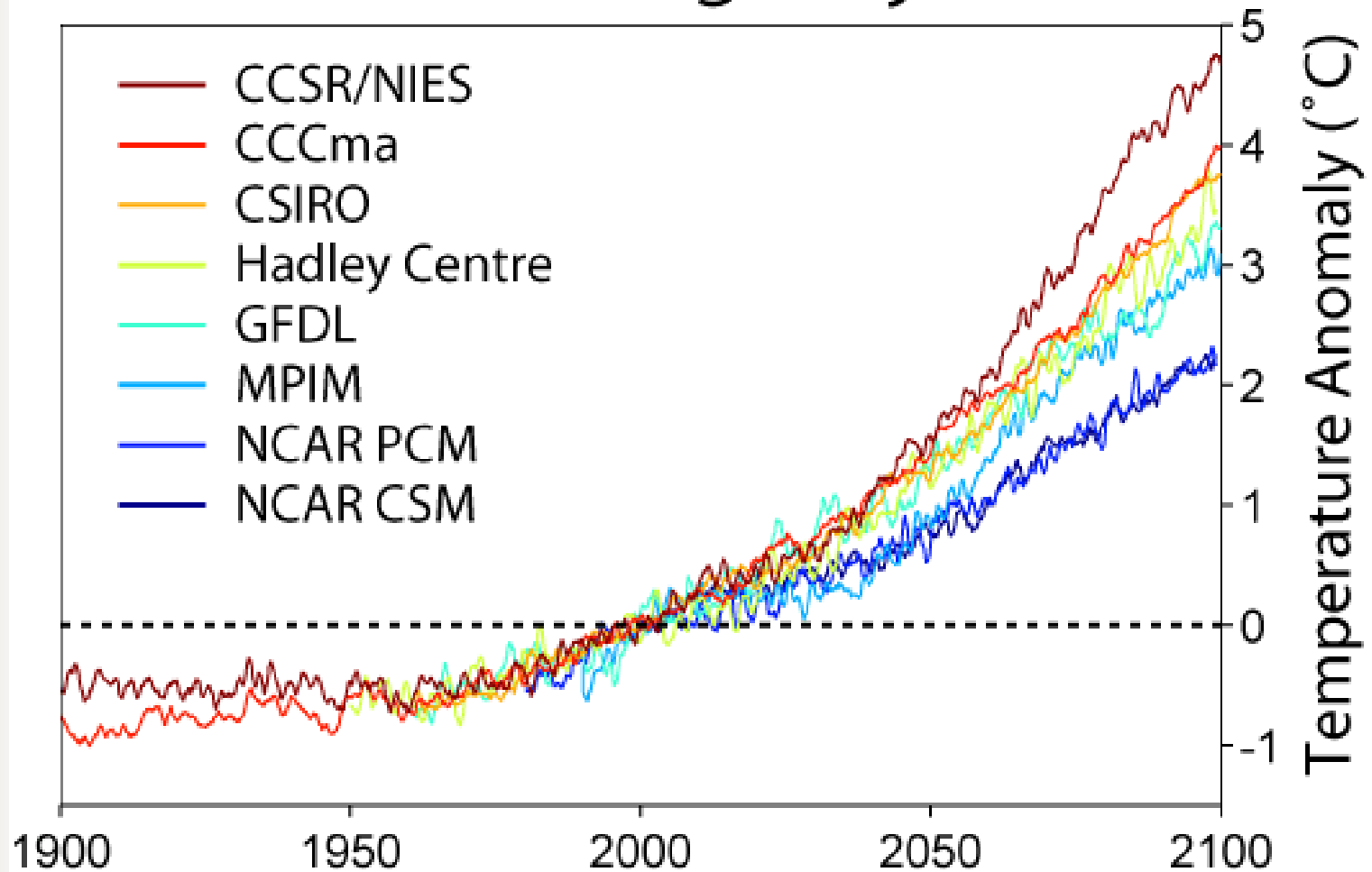
- Real
- Man-caused
- Storms, drought, heat waves
- Sea levels rising
- Most significant threat to mankind
- Must act NOW!

*“Before this century is over,
billions of us will die ... “*

James Lovelock, scientist

■ Debunked by the NIPCC

Global Warming Projections



Global Cooling (GC) -> Global Warming (GW)?

GC alarmists – Gov. **Brown**, Dr. John **Holdren**, Dr. Paul **Ehrlich**

GW alarmists – Gov. **Brown Jr.**, Dr. John **Holdren**, Al **Gore**



Global Cooling? Global Warming?

**Gov. Jerry Brown's 1977 Global Cooling BS, Recycled
As Gov. Jerry Brown, Jr's 2014 Global Warming BS**
Posted on July 30, 2014




In 1977, **Governor Brown** warned that California was facing an unprecedented drought, blamed at the time on **Global Cooling**



CALIFORNIA GOVERNOR JERRY BROWN:


**1977: 'UNPRECEDENTED
CALIFORNIA DROUGHT
CAUSED BY GLOBAL COOLING'**

**2015: 'UNPRECEDENTED
CALIFORNIA DROUGHT
CAUSED BY
GLOBAL WARMING'**



**'HOT, COLD - WHAT'S
THE DIFFERENCE?'**

DAVIDNCKE.COM



“The entire North
'polarized' cap will
disappear in 5 years.”

-Al Gore, 2008



North Pole Ice Cap
August, 2013

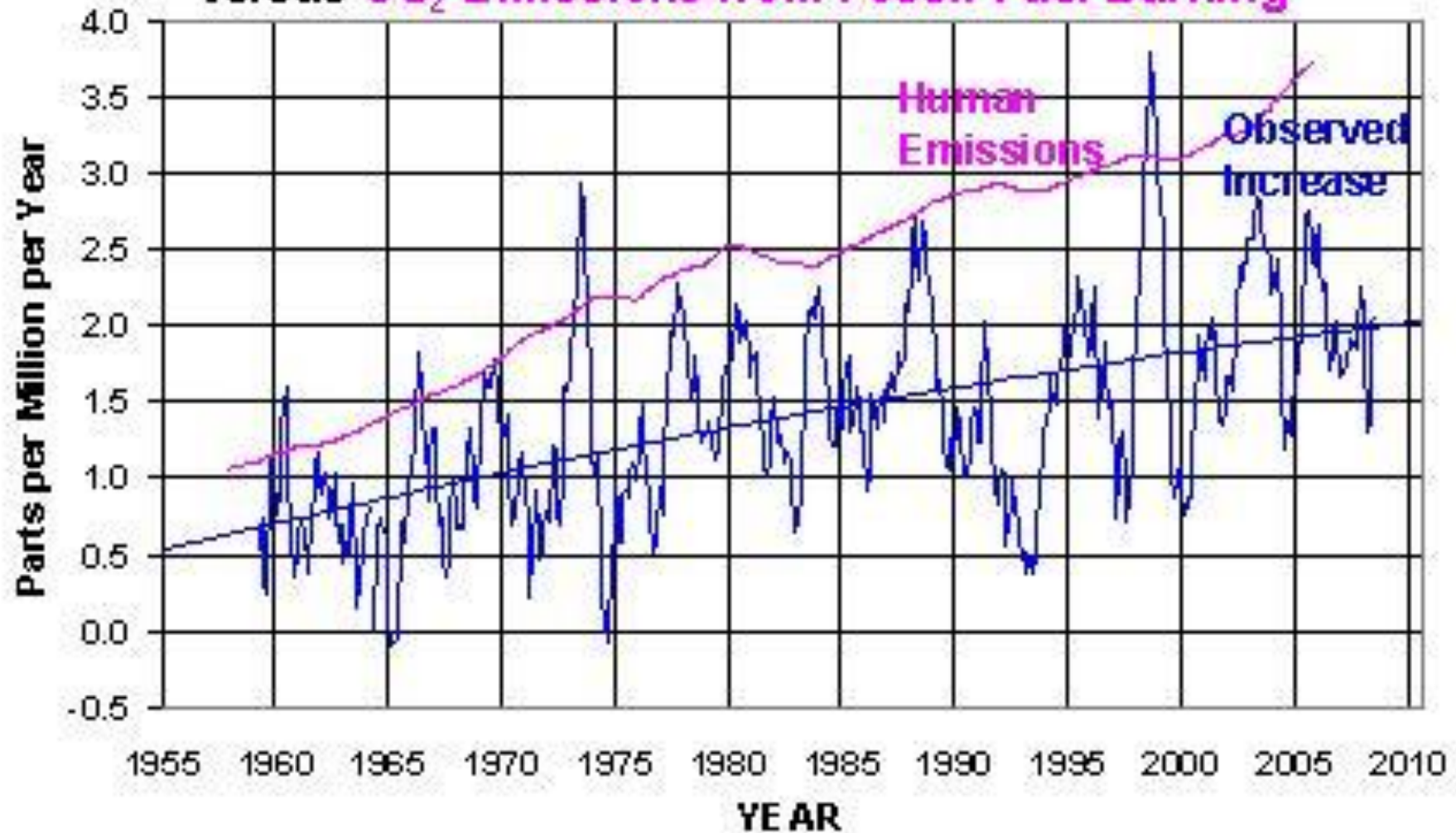


Botched Predictions for 2015

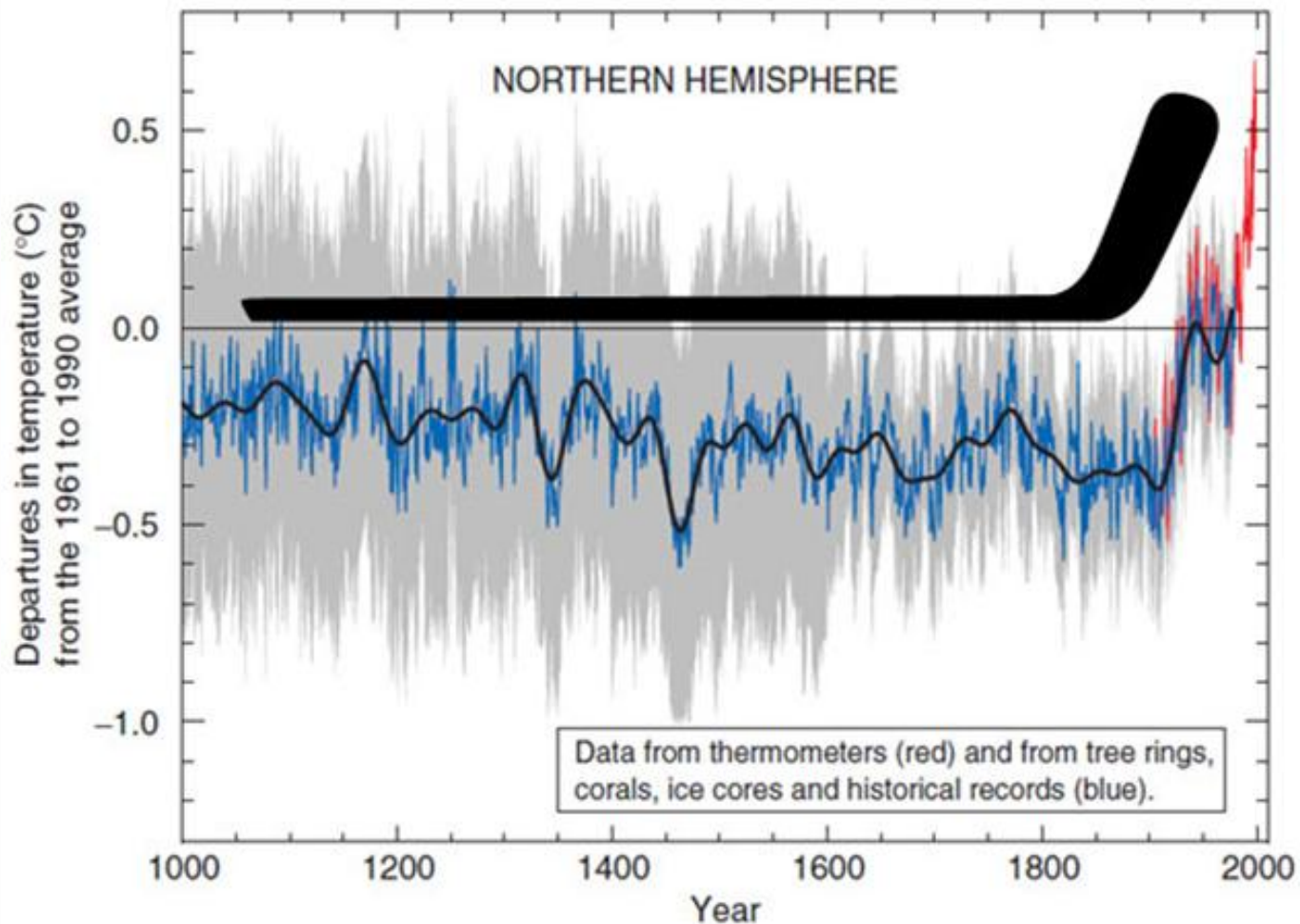
- Predictions by Dr. Paul Ehrlich, **Dr. John Holdren** [Obama's Science Advisor], the UN
 - Made in **1970's** and **1980's** about **Global Cooling**
- All came to naught:
 - UN overestimated GW by 2015
 - All Rainforest Species Will Be Extinct
 - Oil will run out by 2015
 - Arctic sea ice will disappear by 2015
 - Looking to the future: A billion people could die from climate change by 2020
- **Holdren in 1971: “new ice age likely”**

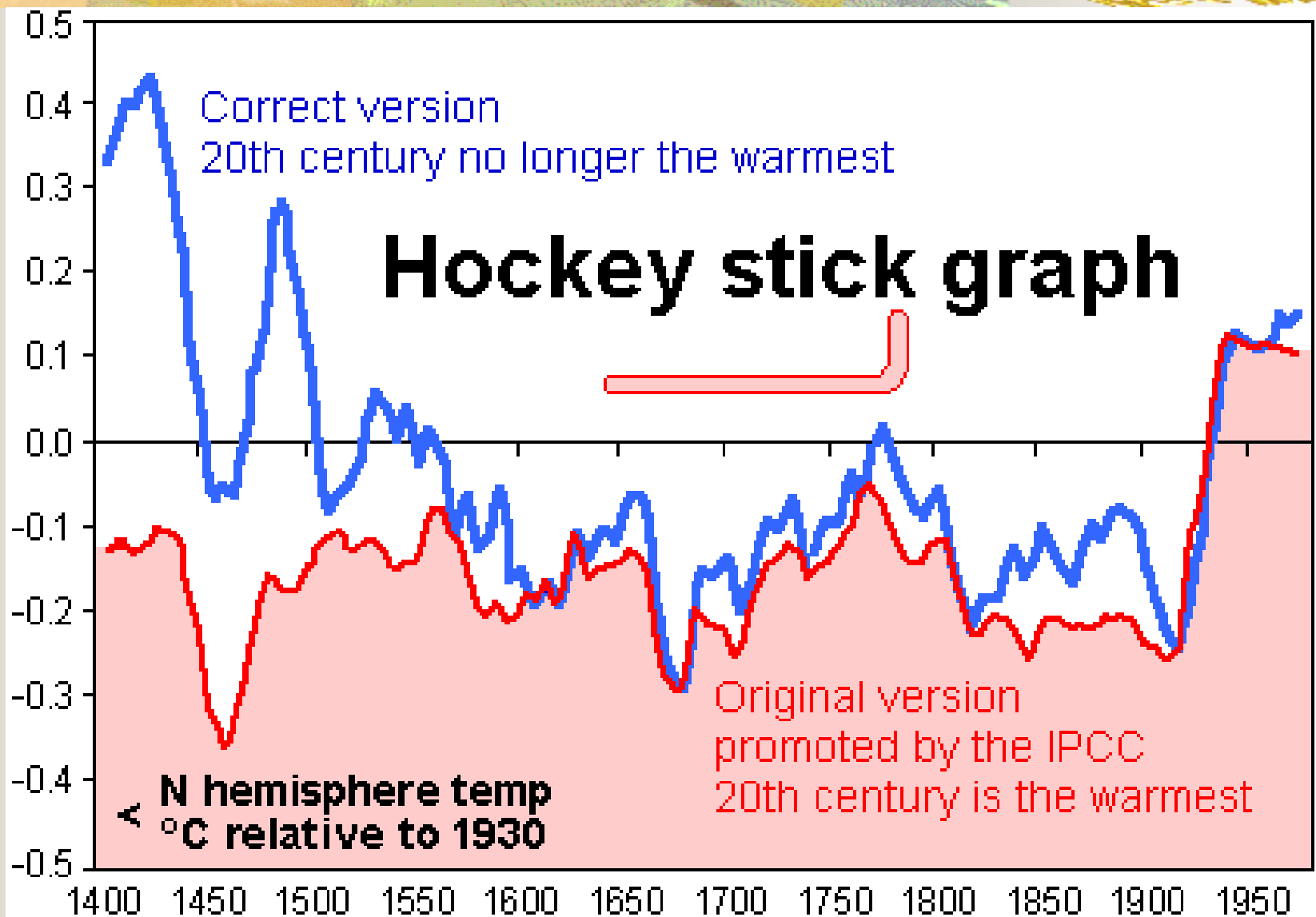
CO₂ Growth Rate at Mauna Loa, HI

versus CO₂ Emissions from Fossil Fuel Burning

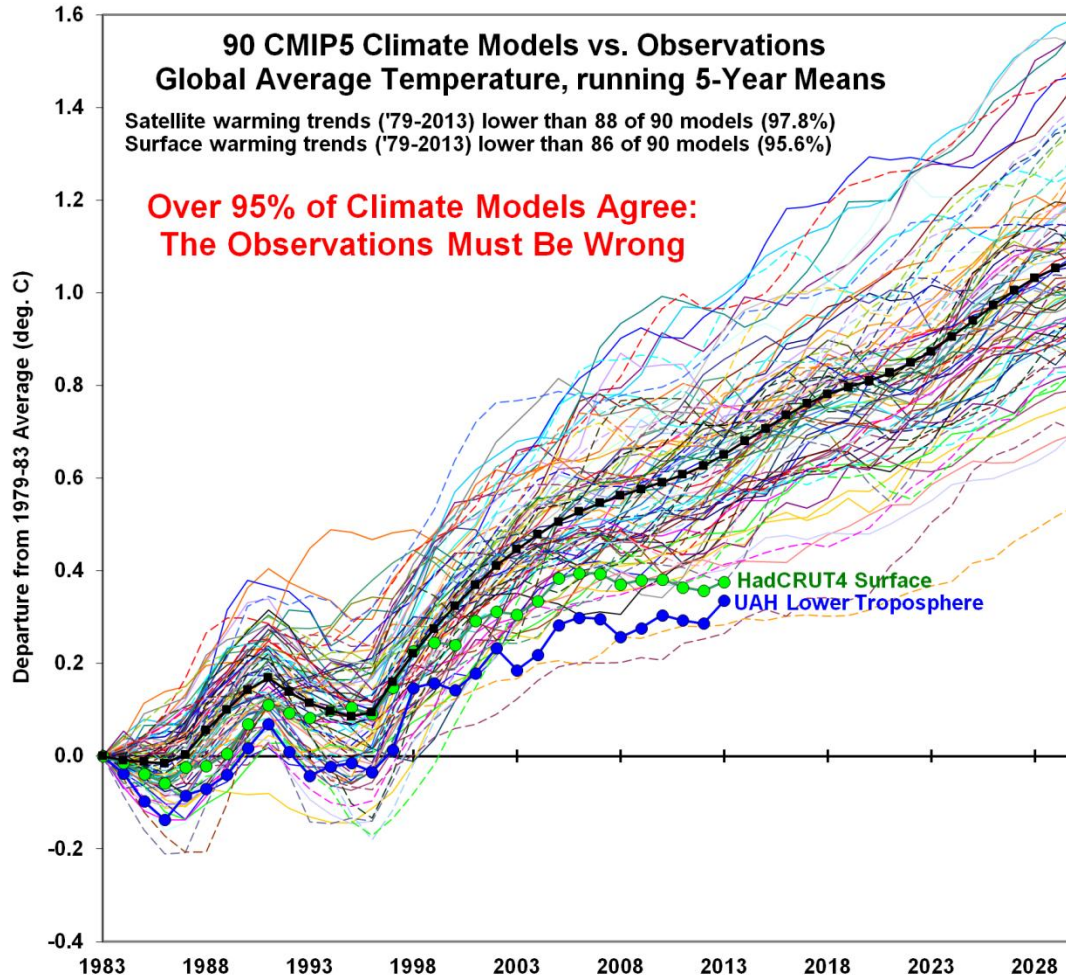


Hockey Stick Chart

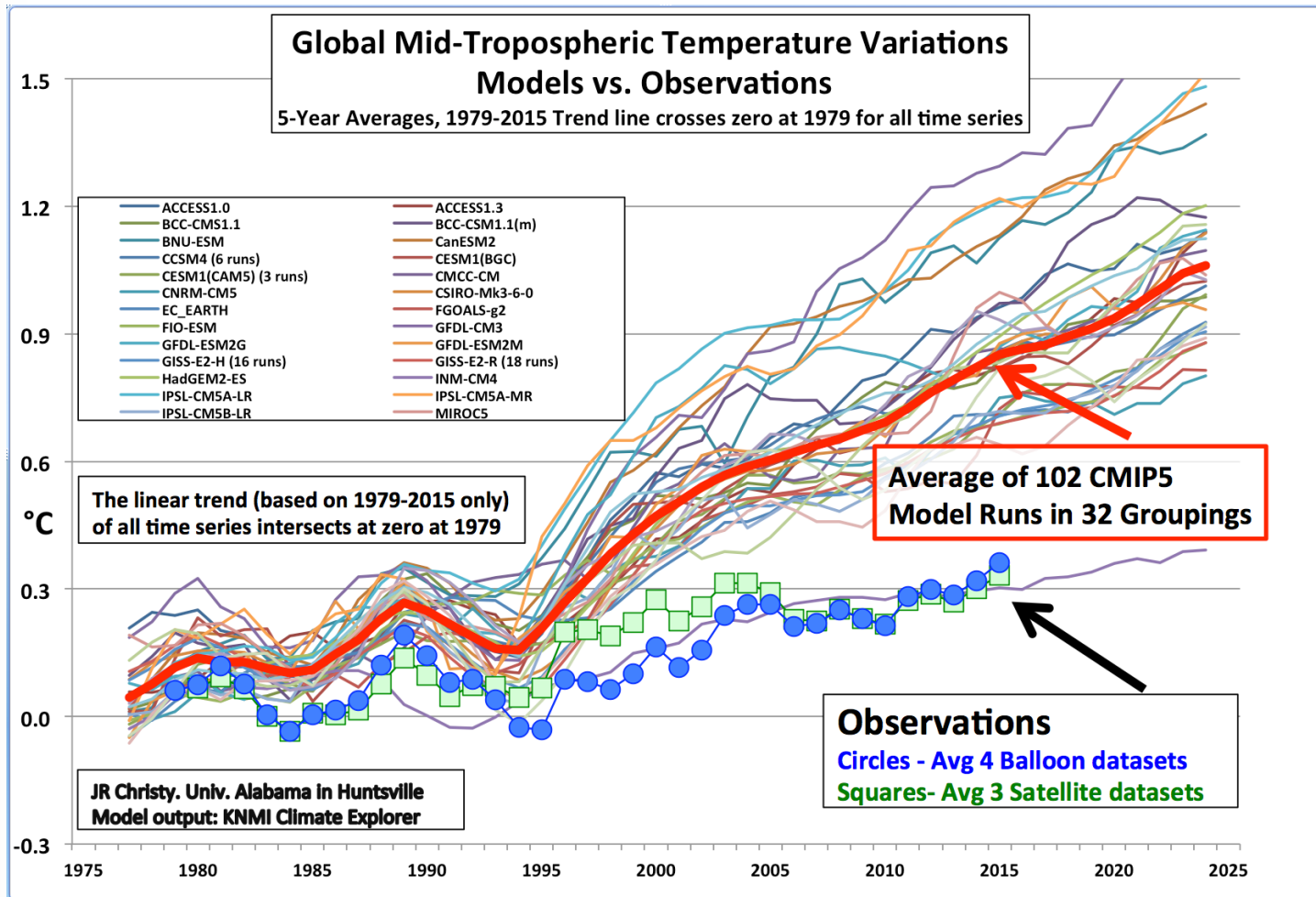




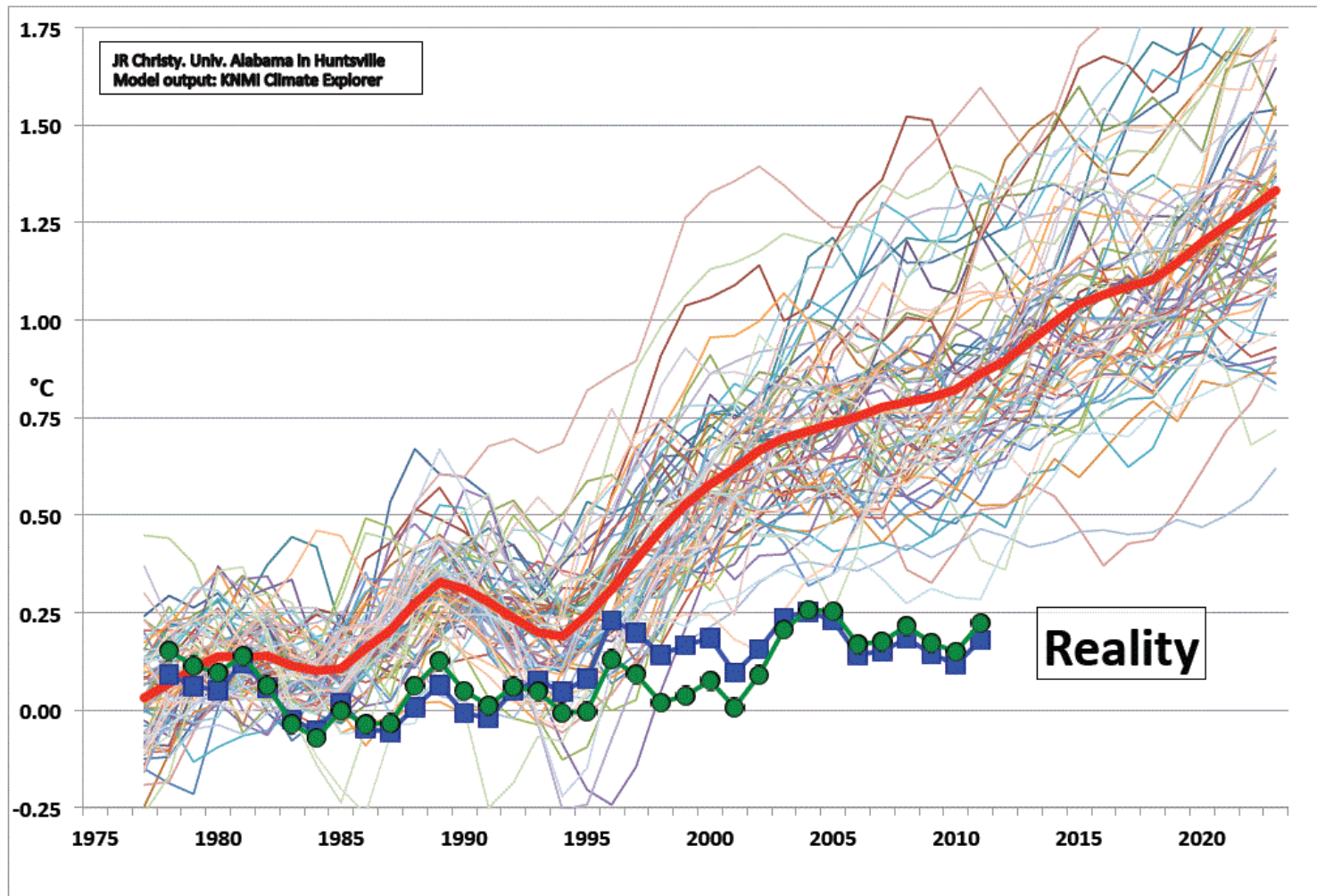
Climate Models vs. Observations



Models vs. Observations

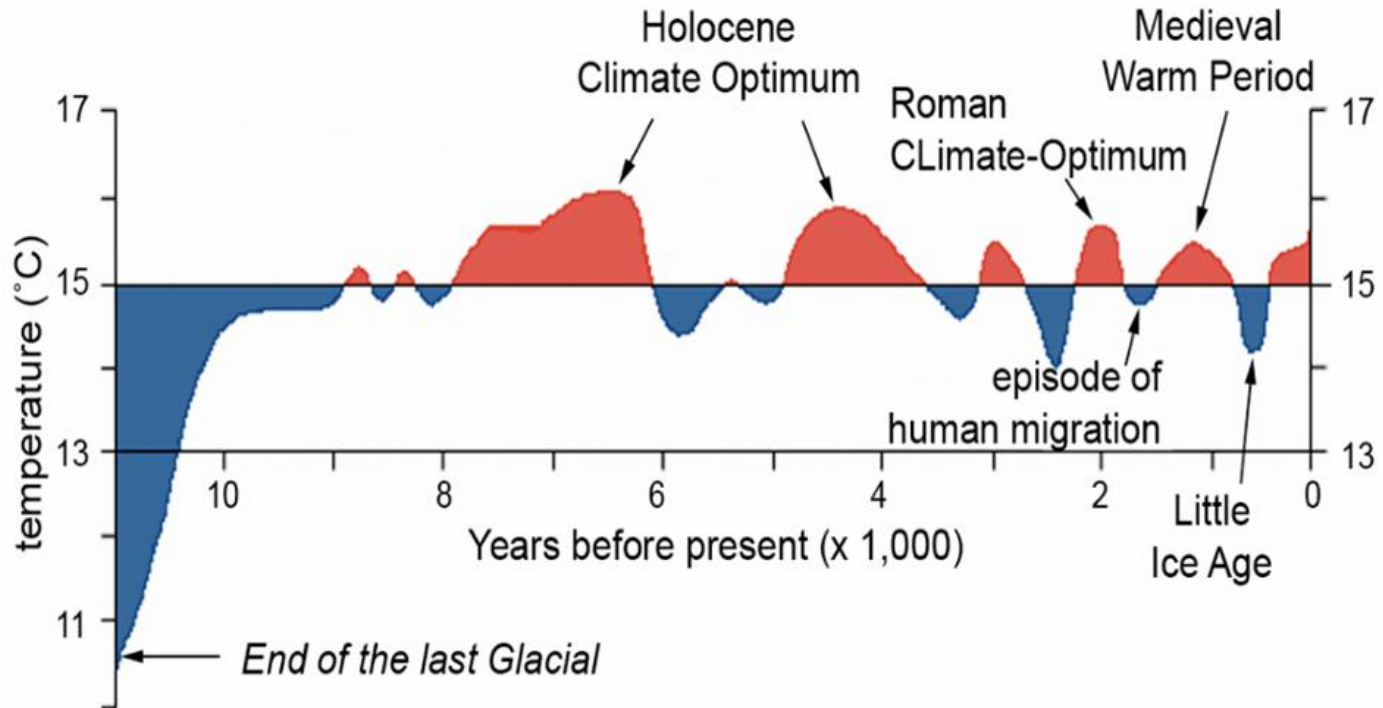


Reality vs. UN IPCC CC Models



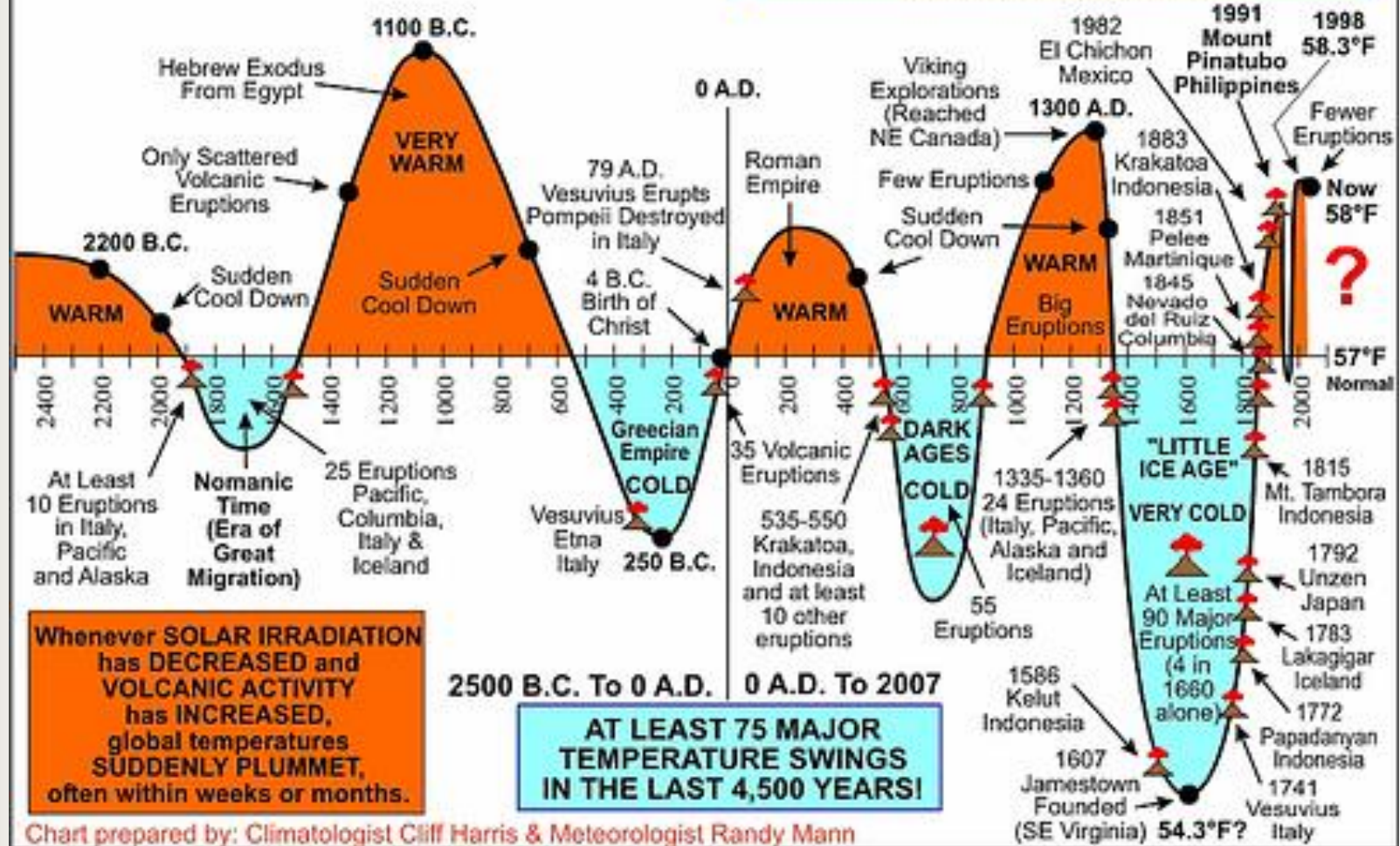
Global Temperature Anomaly

Northern Hemispheric temperature reconstruction for the past 10,000+ years



GLOBAL TEMPERATURES (2500 B.C. TO 2007 A.D.)

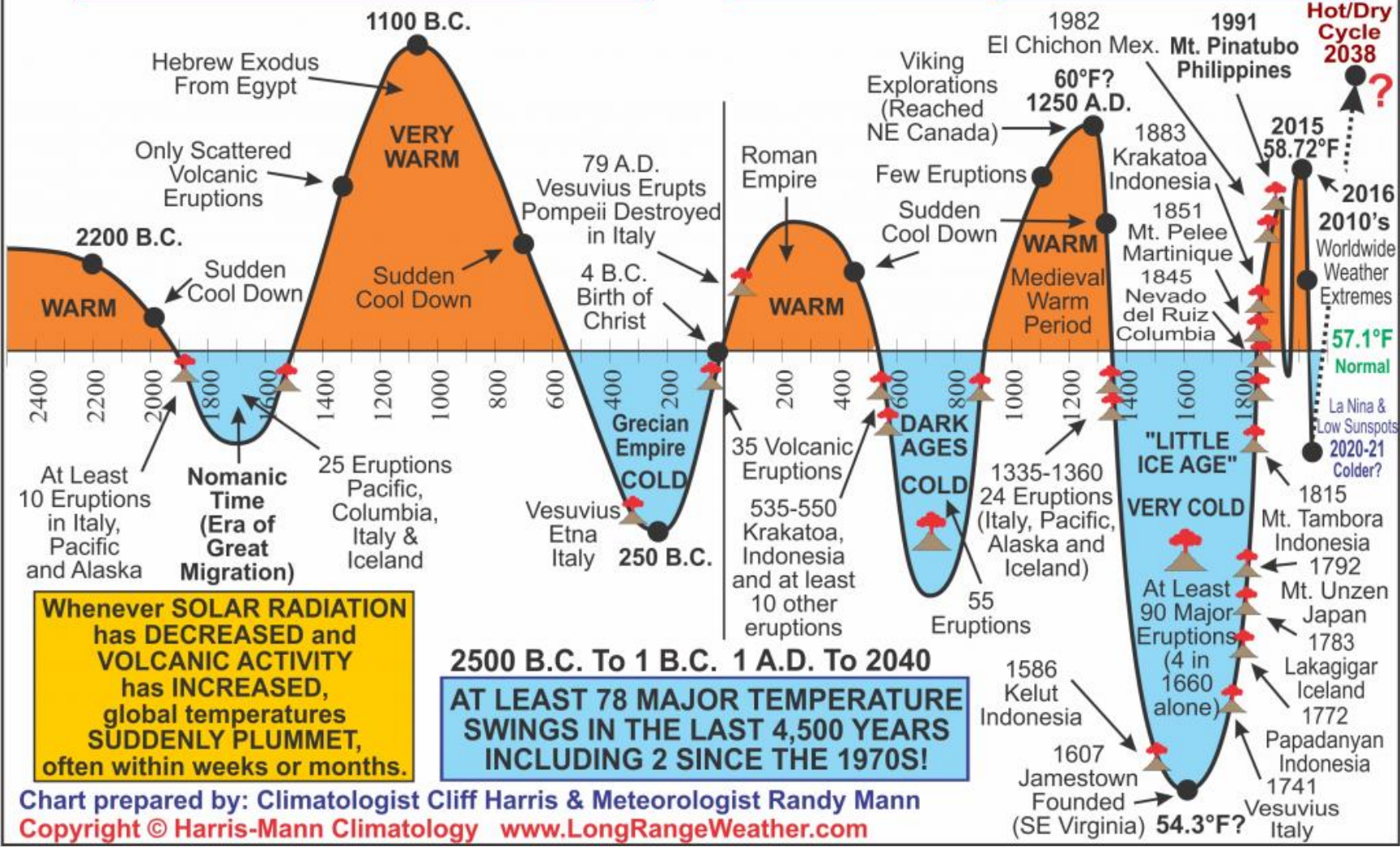
MOUNT PINATUBO ERUPTION (Philippines)
 1.1 Degree F. Rapid Cool Down (June 1991 to March 1992)
 Global Temperature Went From 0.6 Degrees Above Normal
 To 0.5 Degrees Below Normal.



GLOBAL TEMPERATURES (2500 B.C. TO 2040 A.D.)

MAJOR GLOBAL COOLING FROM 2007 TO 2009
 A 0.9 Degree Fahrenheit drop in global temperatures occurred from October 2007 to February 2009.

MOUNT PINATUBO ERUPTION (Philippines)
 1.1 Degree F. Rapid Cool Down (June 1991 to March 1992)
 Global Temperature Went From 0.6 Degrees Above Normal To 0.5 Degrees Below Normal.

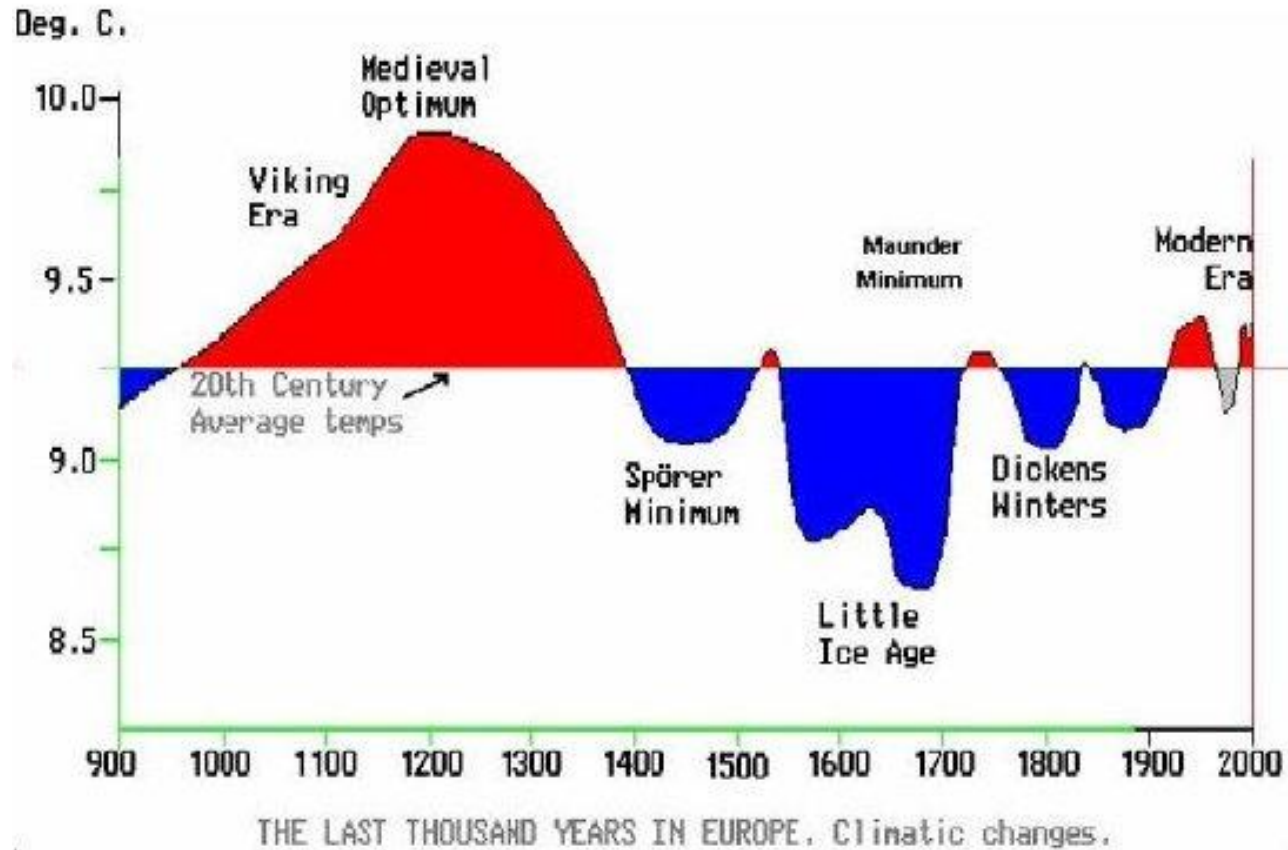


Whenever SOLAR RADIATION has DECREASED and VOLCANIC ACTIVITY has INCREASED, global temperatures SUDDENLY PLUMMET, often within weeks or months.

2500 B.C. To 1 B.C. 1 A.D. To 2040
AT LEAST 78 MAJOR TEMPERATURE SWINGS IN THE LAST 4,500 YEARS INCLUDING 2 SINCE THE 1970S!

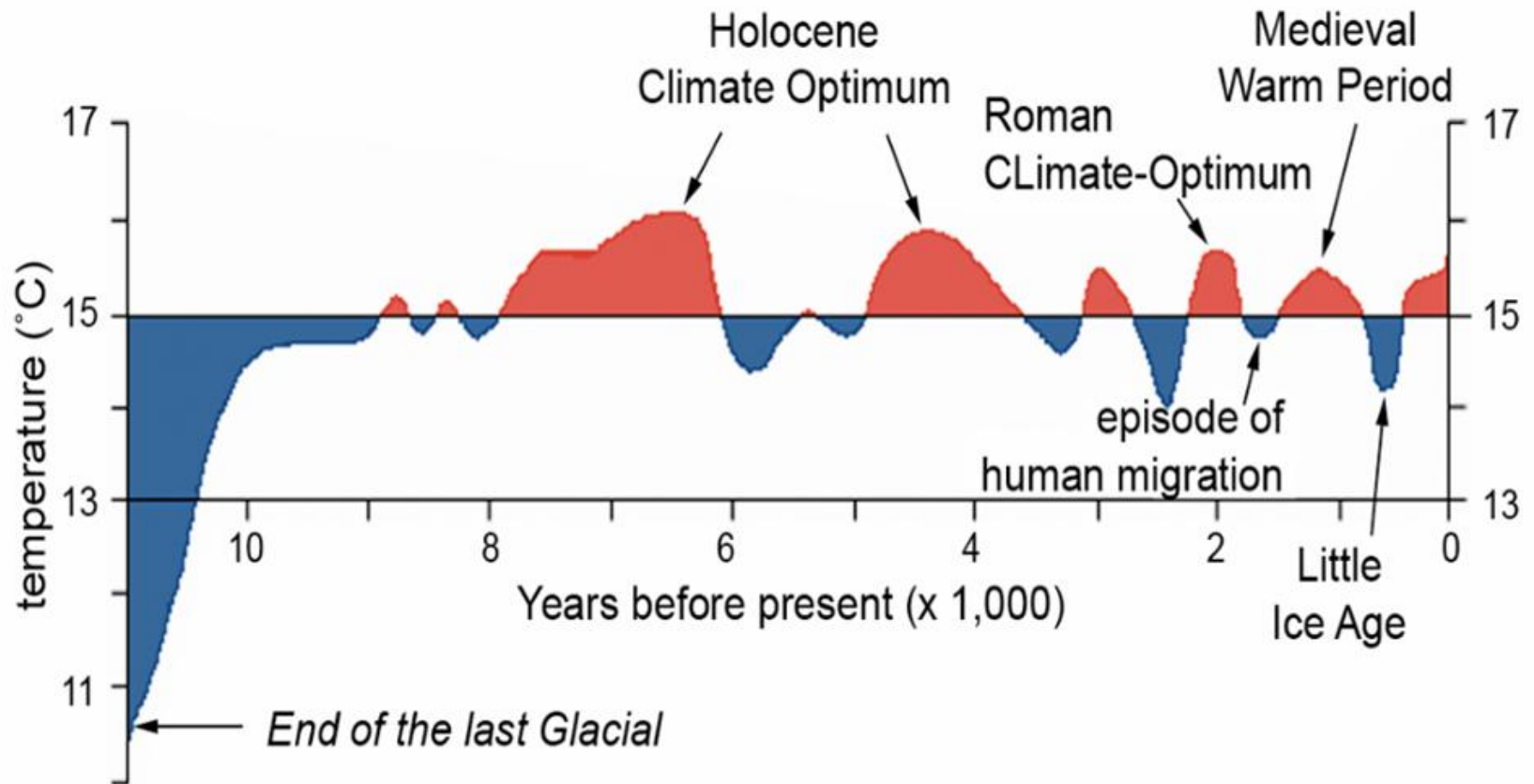
Chart prepared by: Climatologist Cliff Harris & Meteorologist Randy Mann
 Copyright © Harris-Mann Climatology www.LongRangeWeather.com

Last Thousand Years in Europe

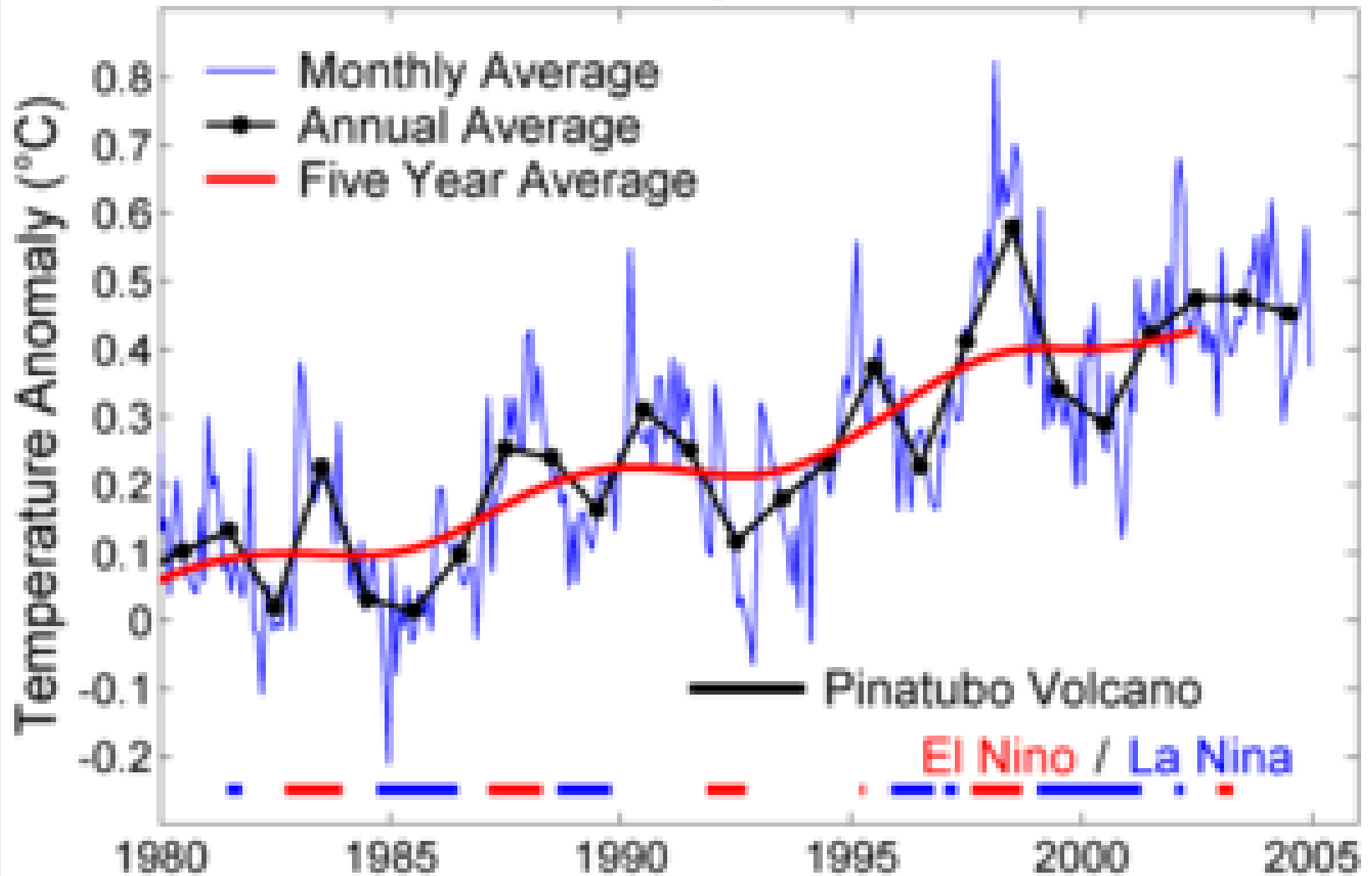


Temperature Reconstruction

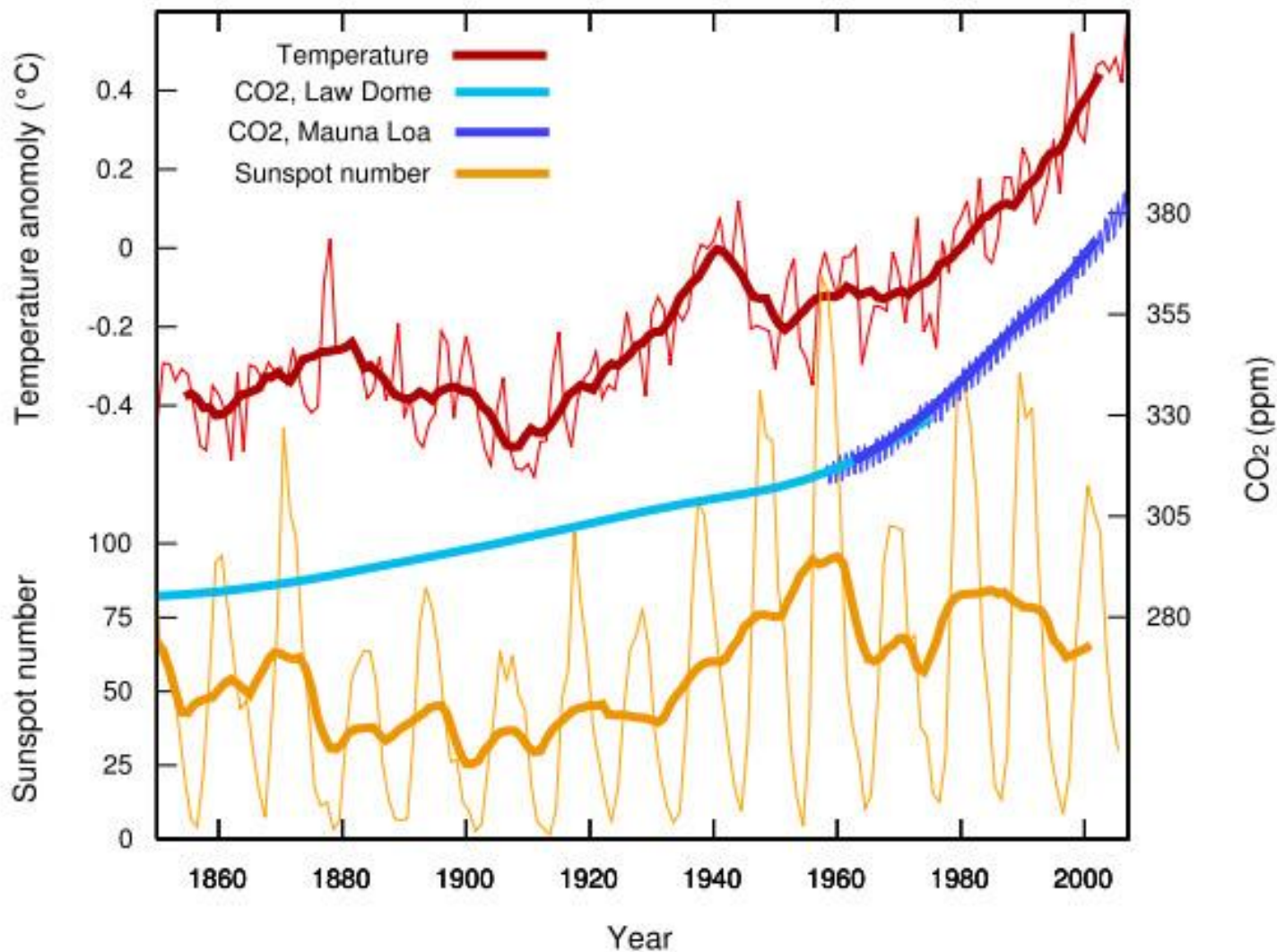
Northern Hemispheric temperature reconstruction for the past 10,000+ years

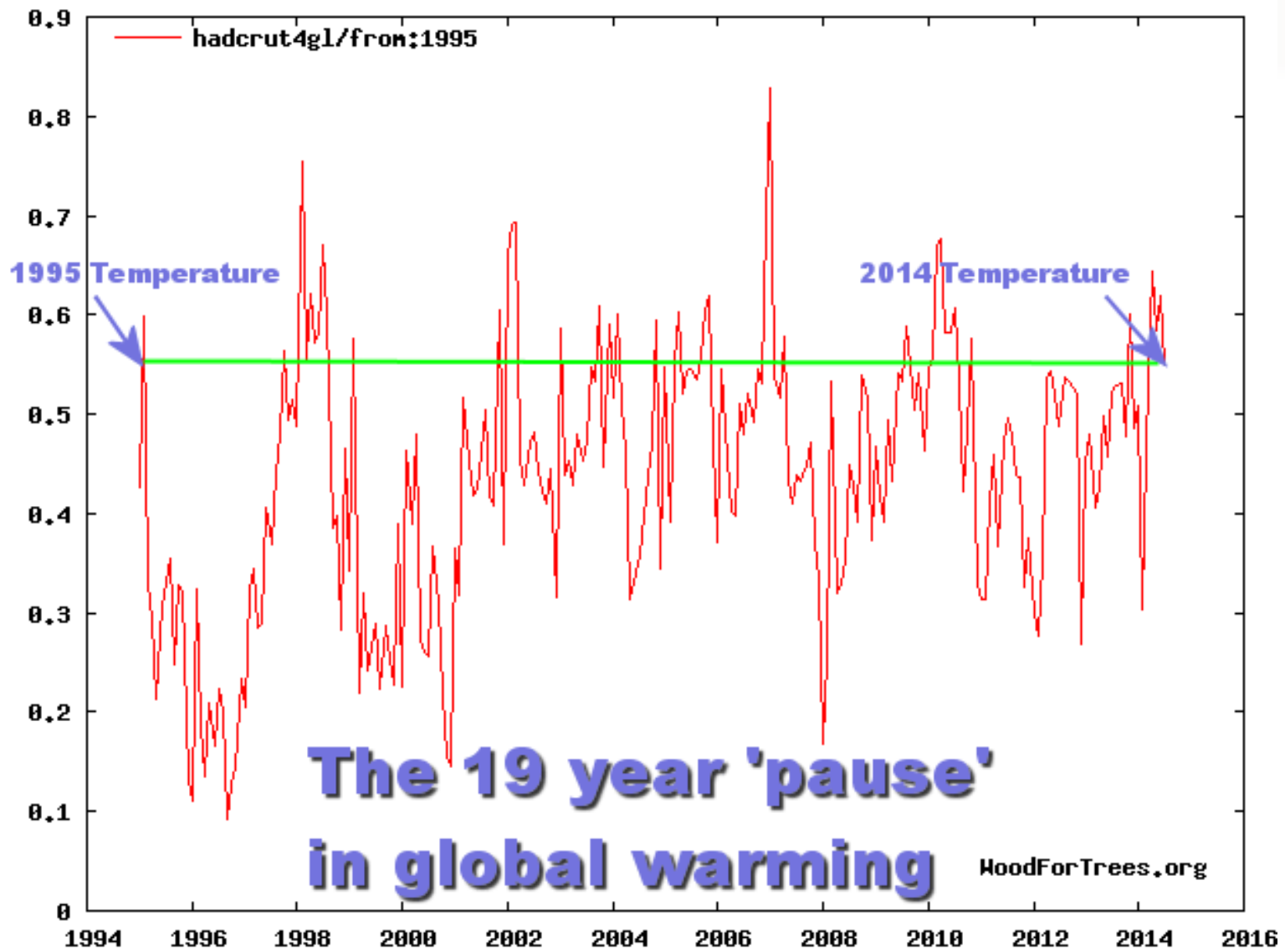


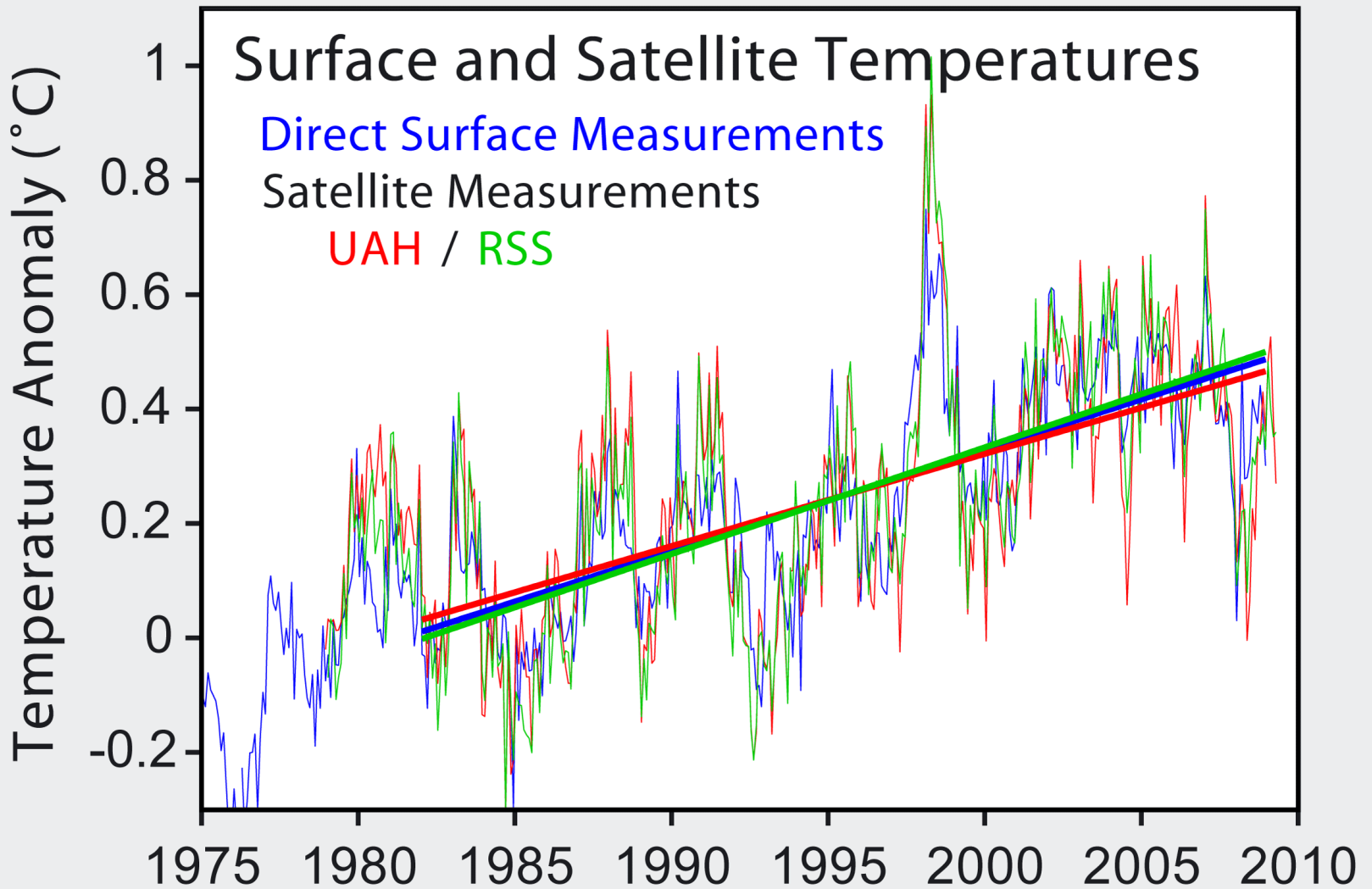
Surface Temperature Record



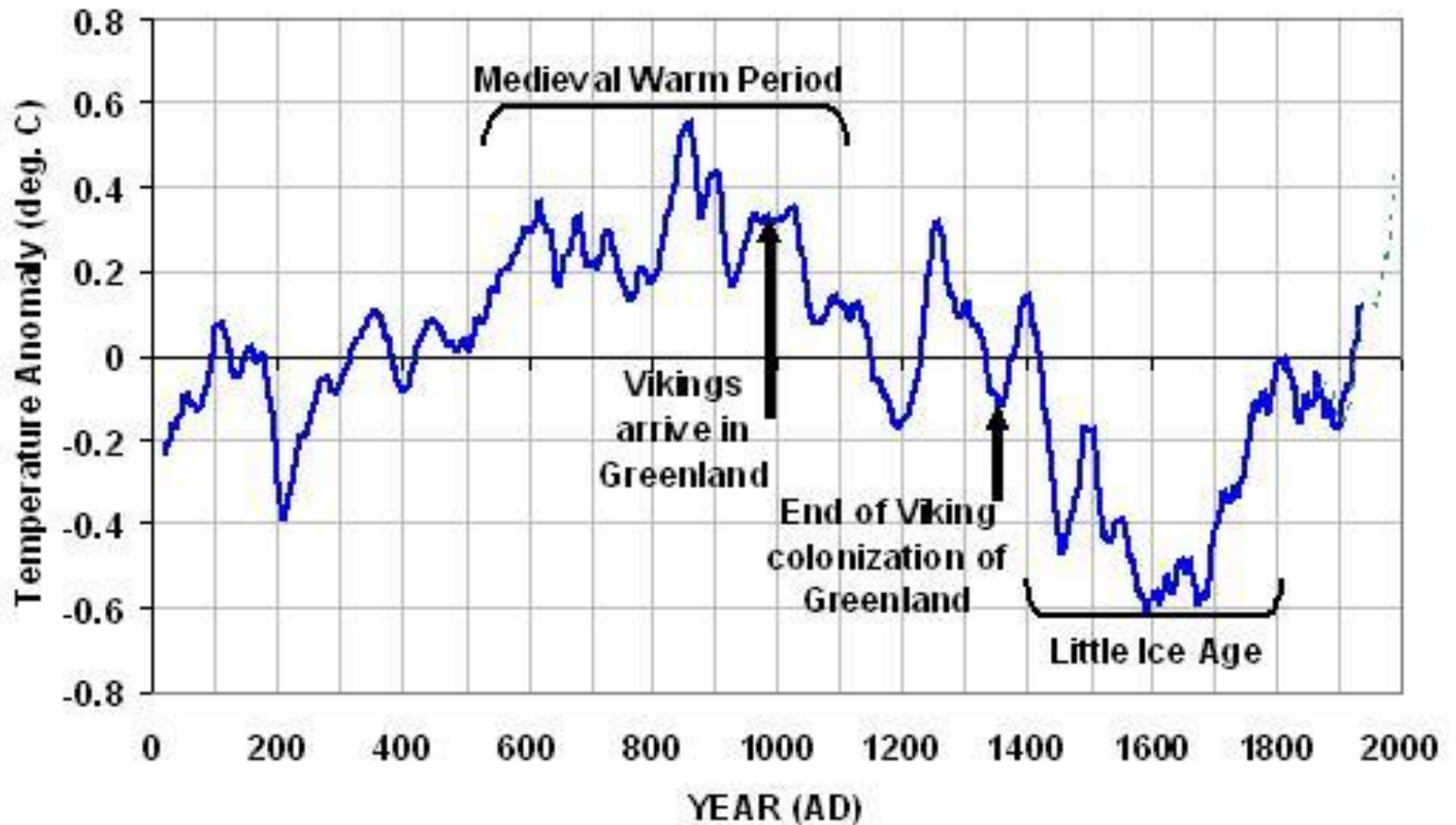
Temperature, CO₂, and Sunspots



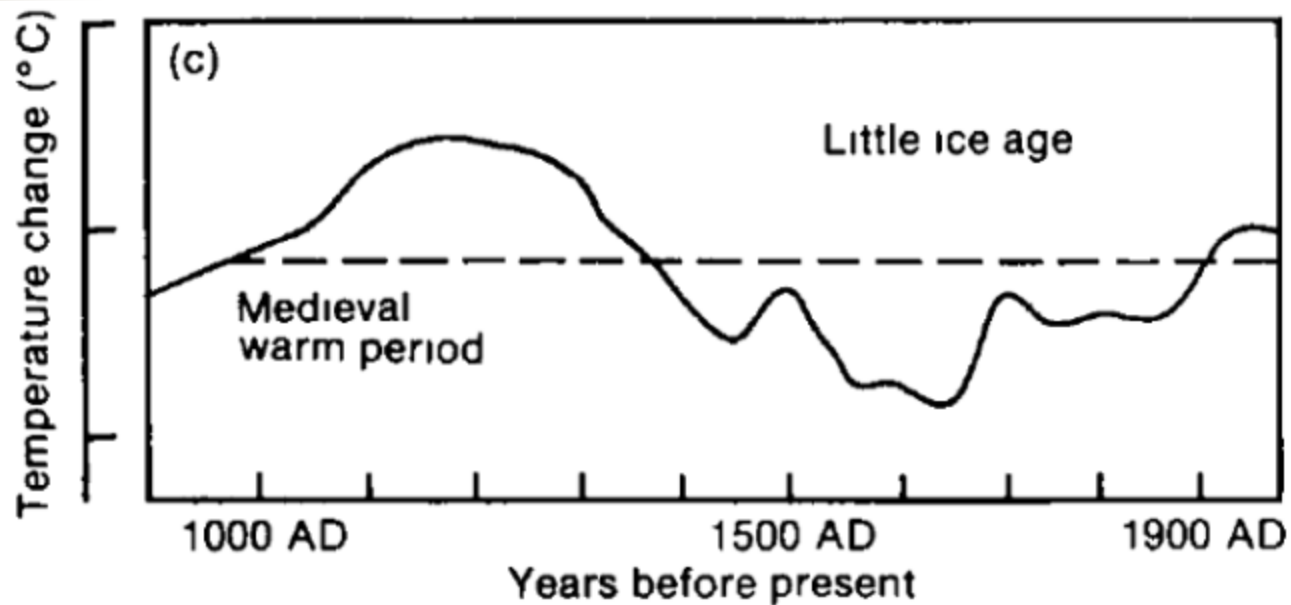




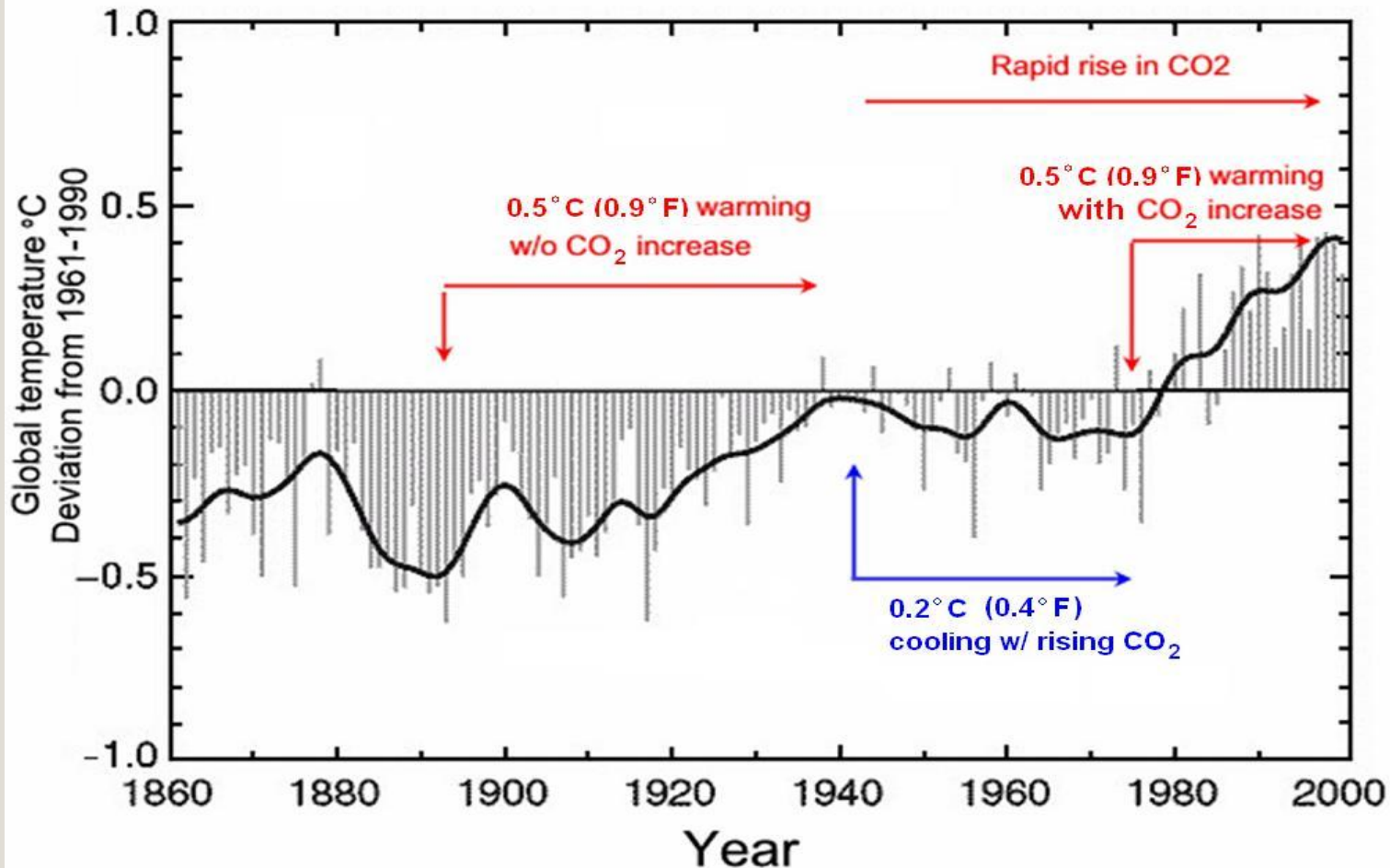
2000 Years of Global Temperatures



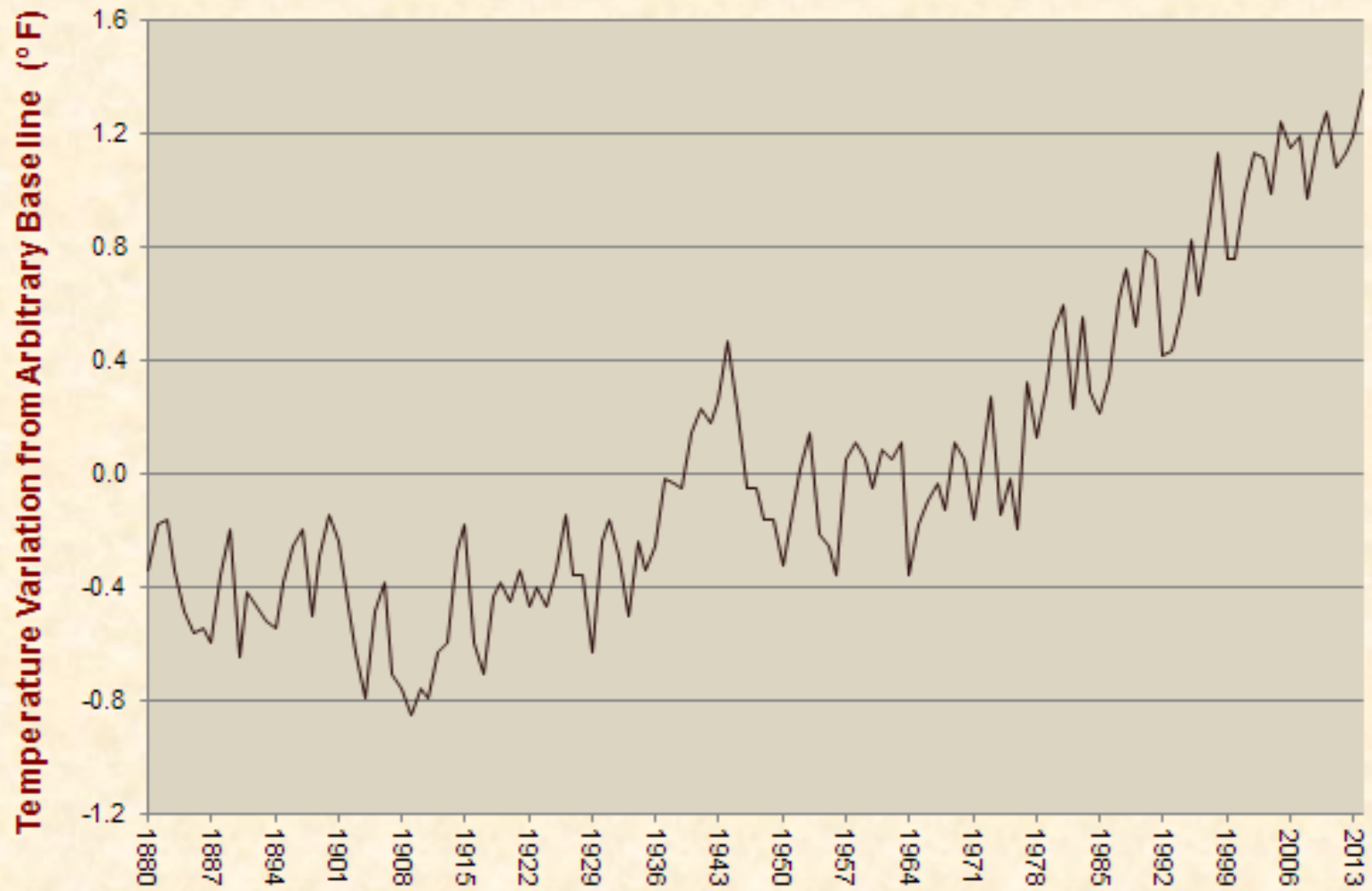
Temperature Change: 1000-1900 AD



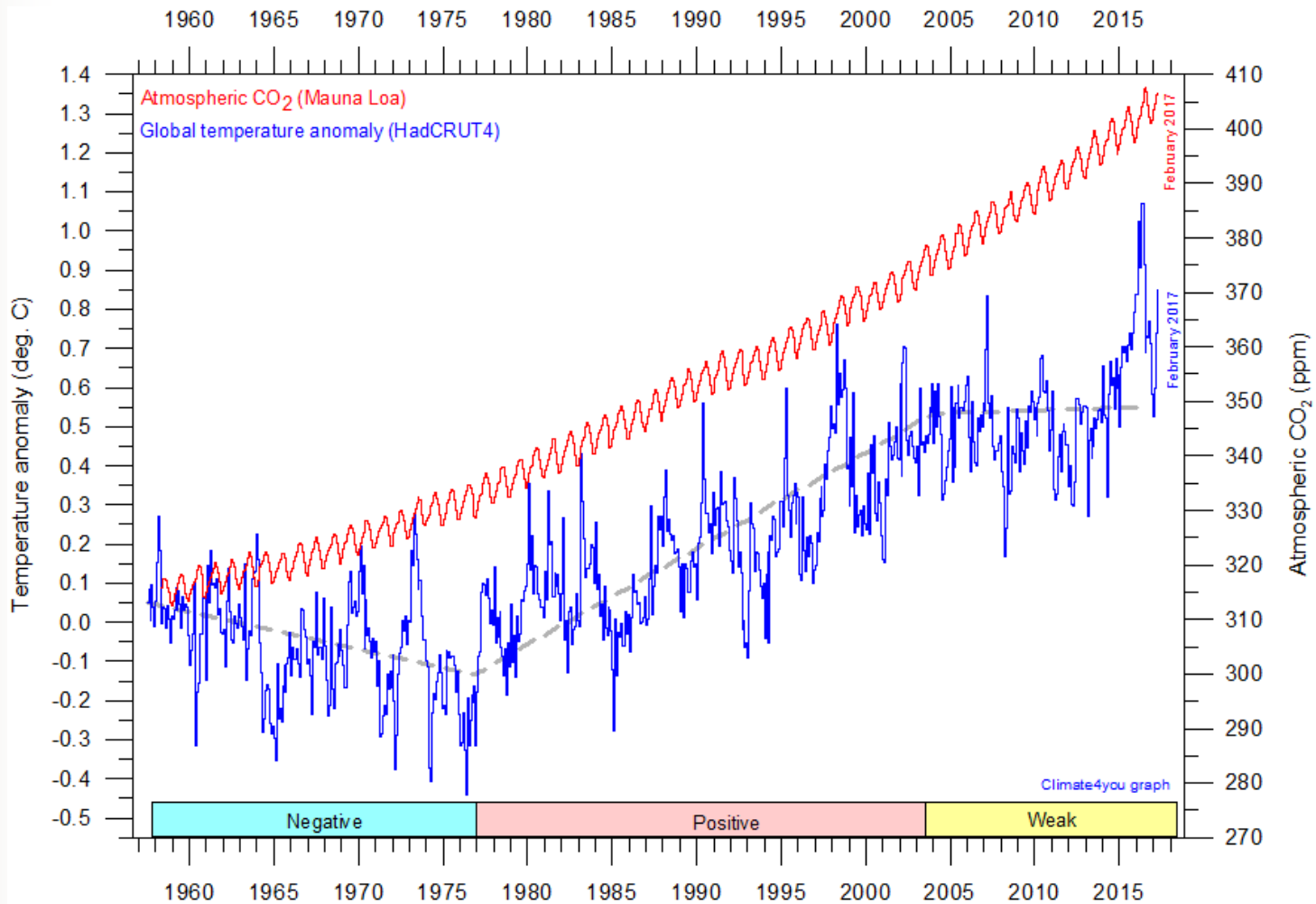
Global Temperature Changes, 1860 - 2000



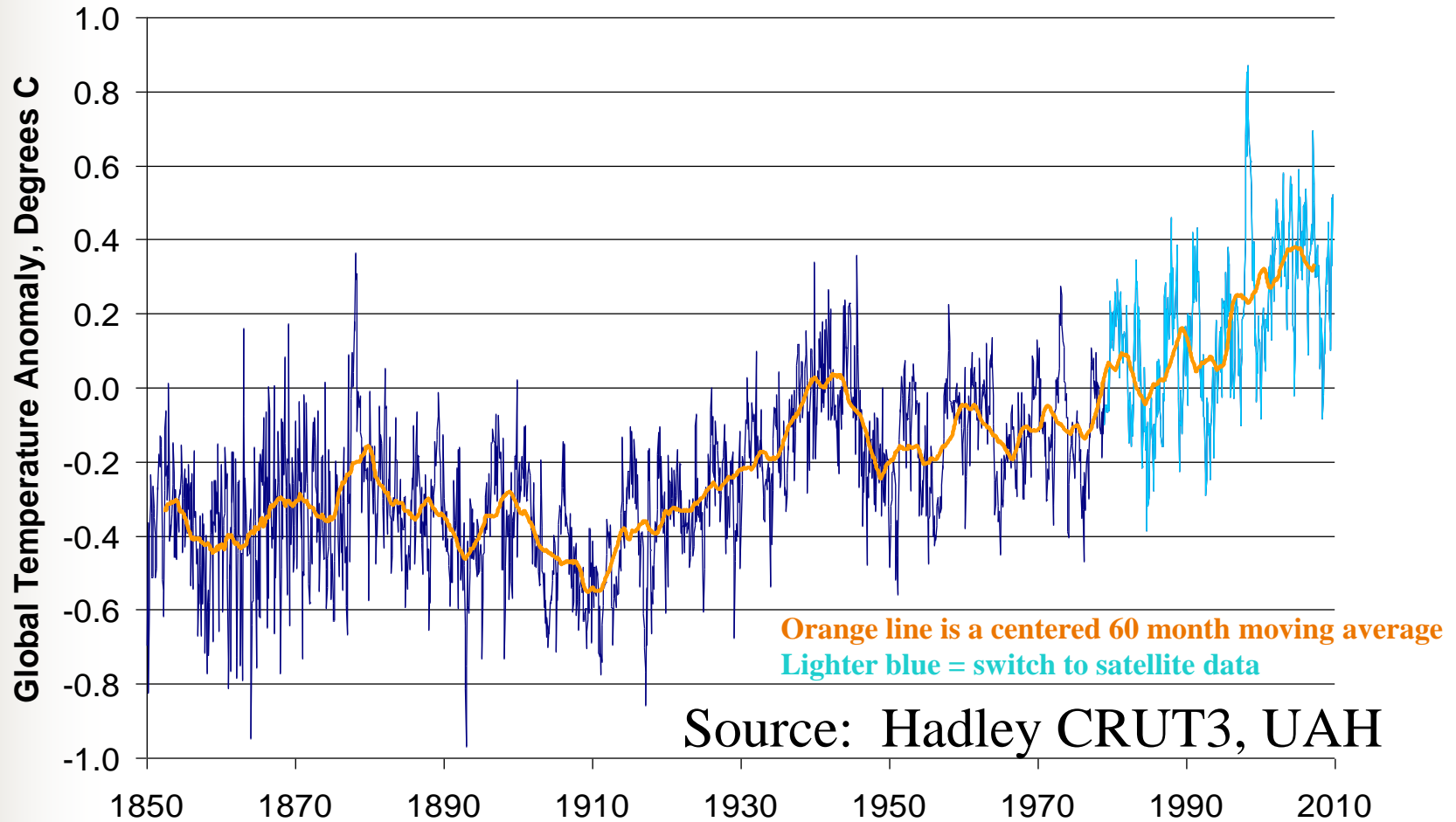
Average Annual Global Surface Temperature Changes (National Aeronautics and Space Administration)



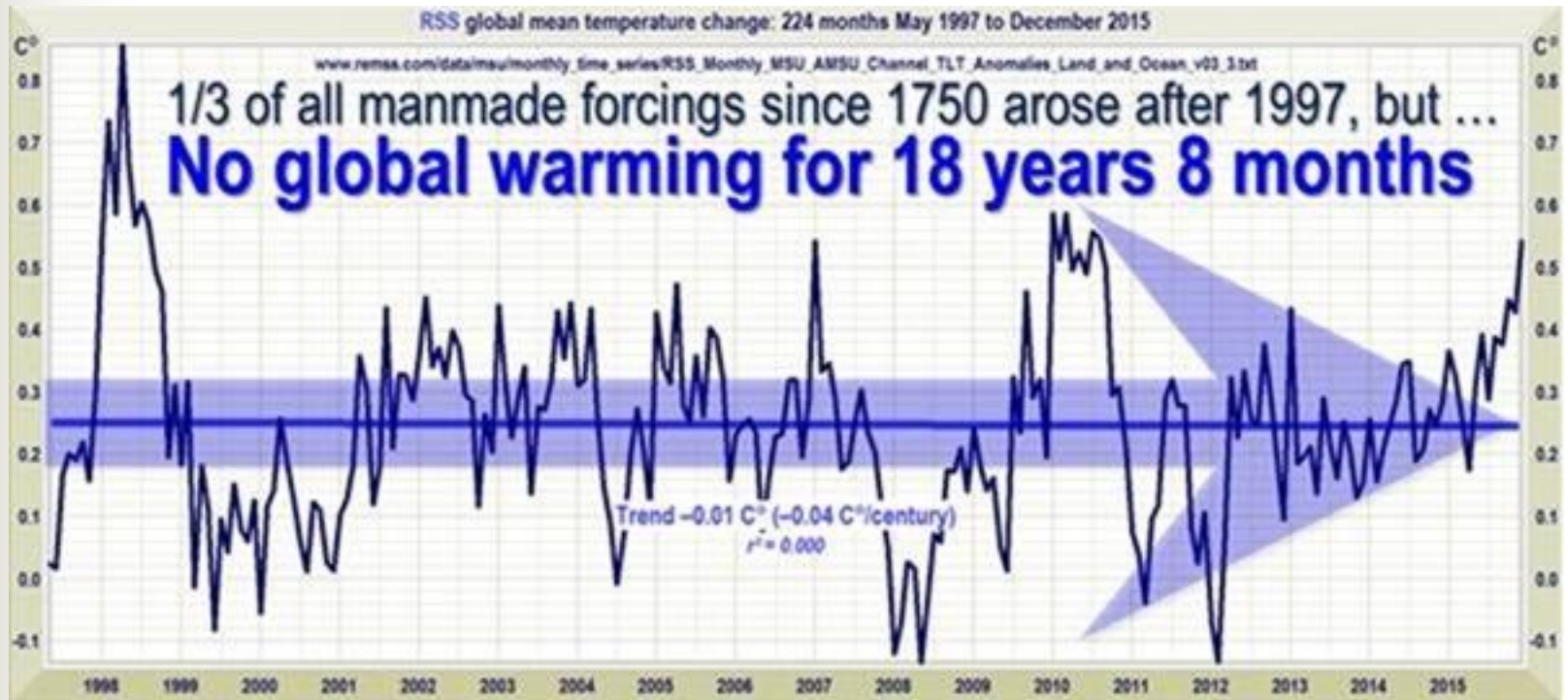
Global Temperature Anomaly

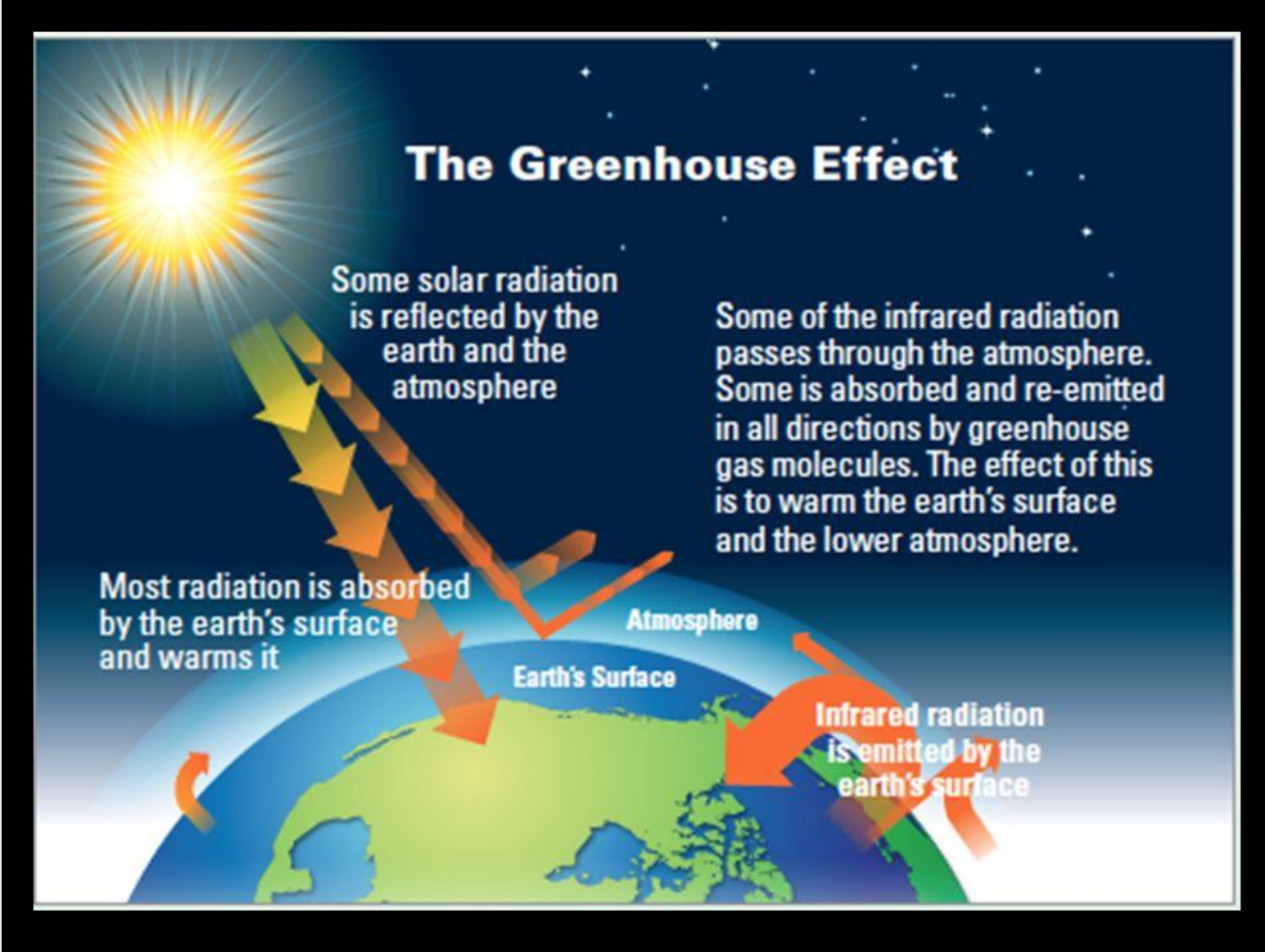


Historic Temperature Record Shows Warming of About 0.6C

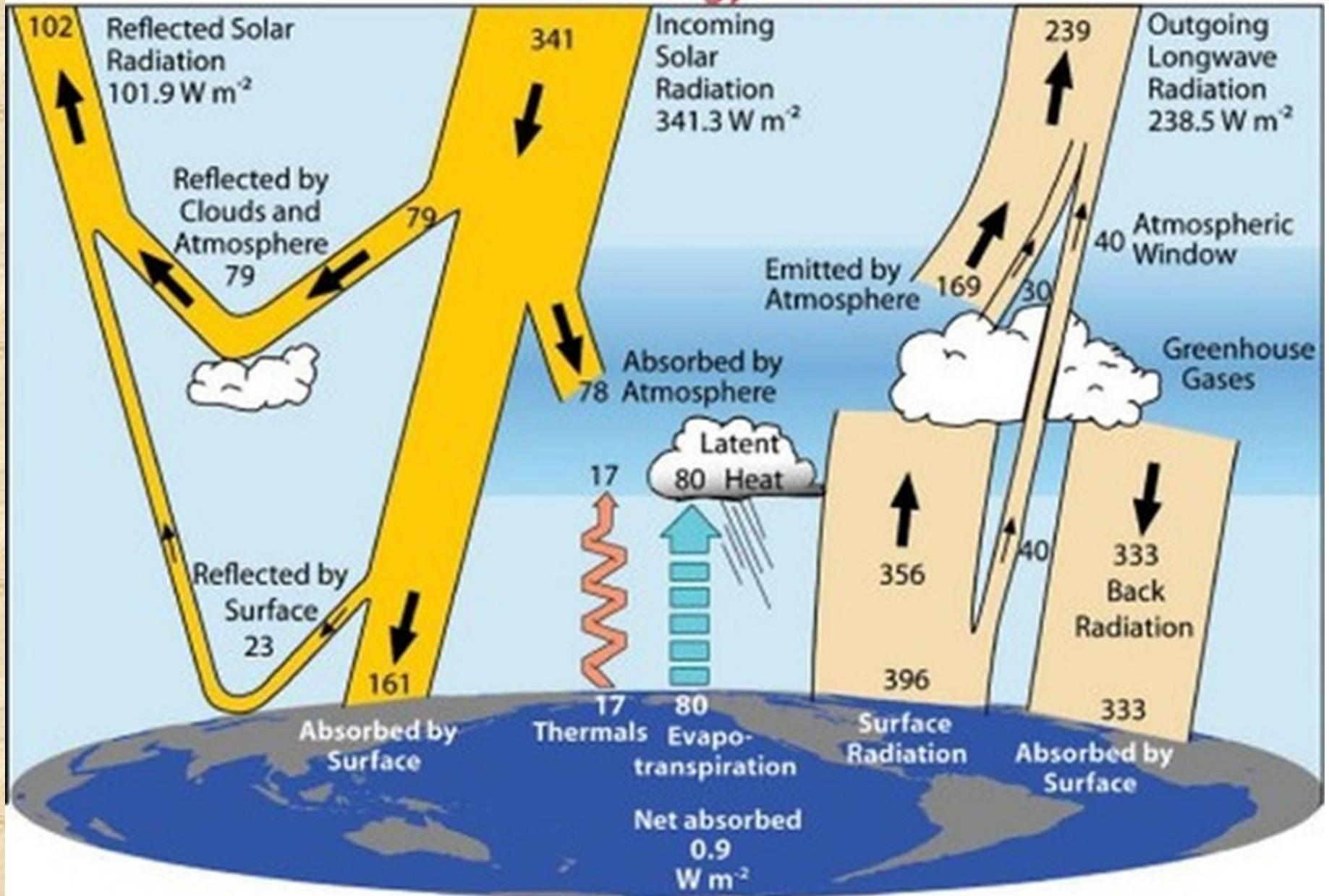


No Global Warming For 19 Years





Global Energy Flows $W m^{-2}$

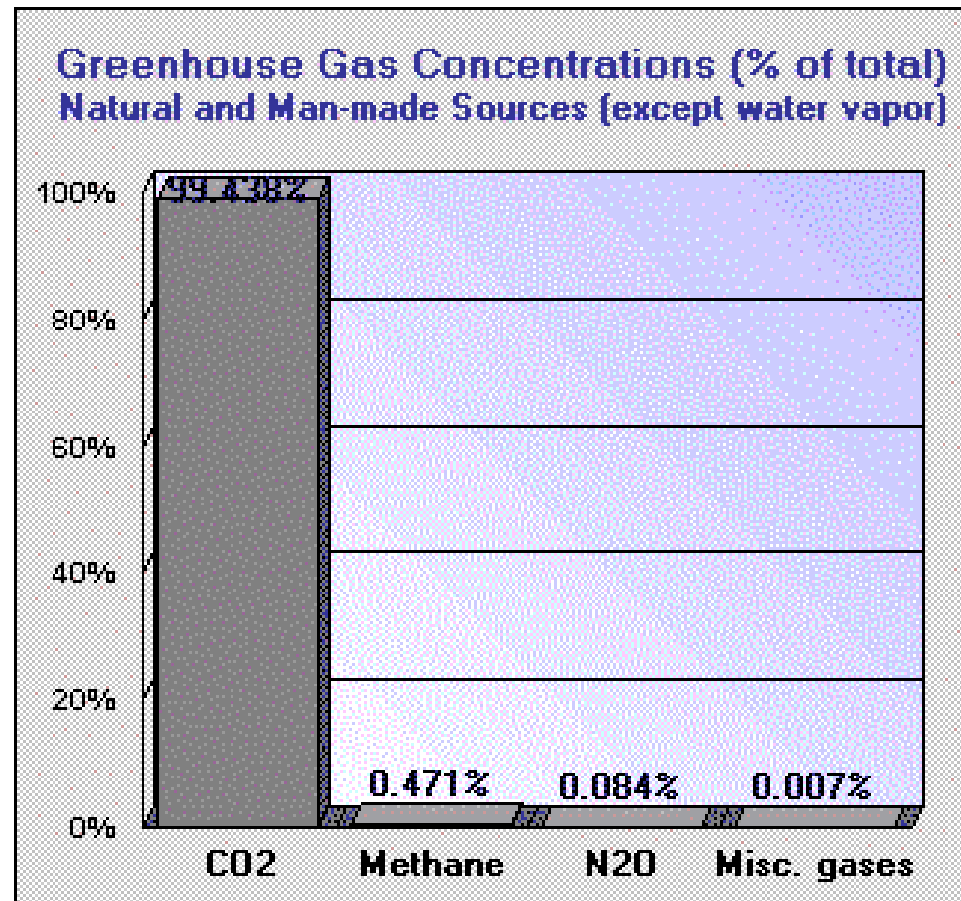


Anthropogenic Contribution

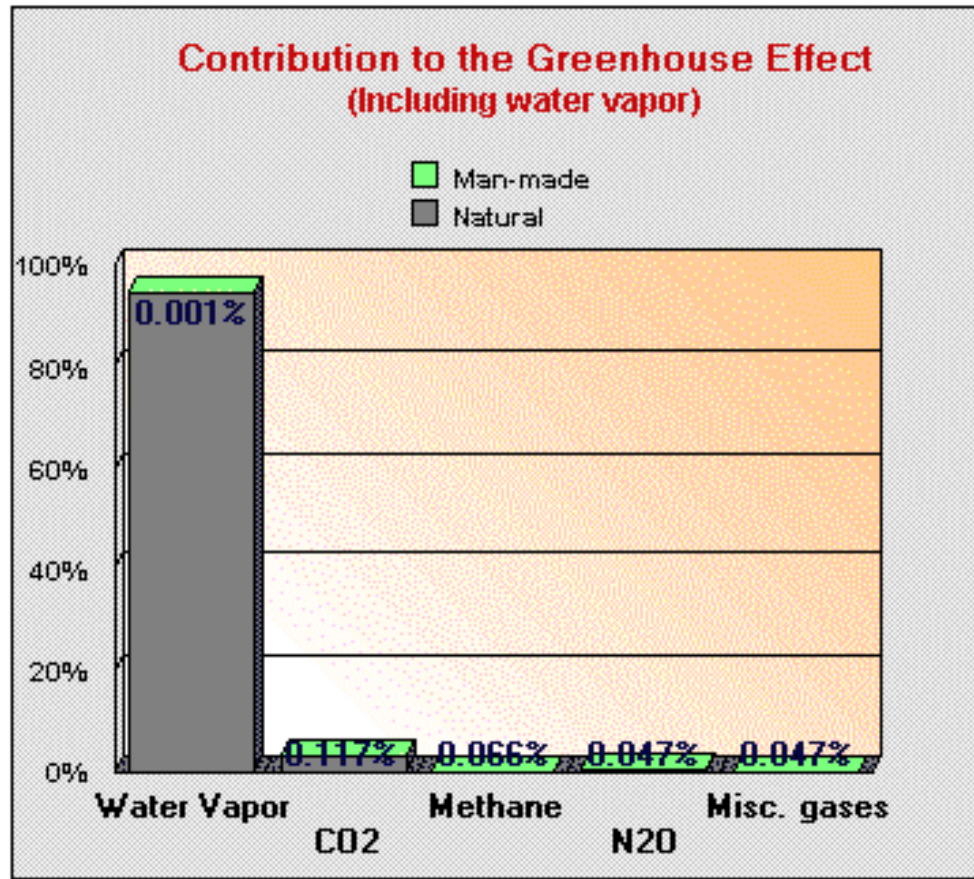
Anthropogenic (man-made) Contribution to the "Greenhouse Effect," expressed as % of Total (water vapor INCLUDED)

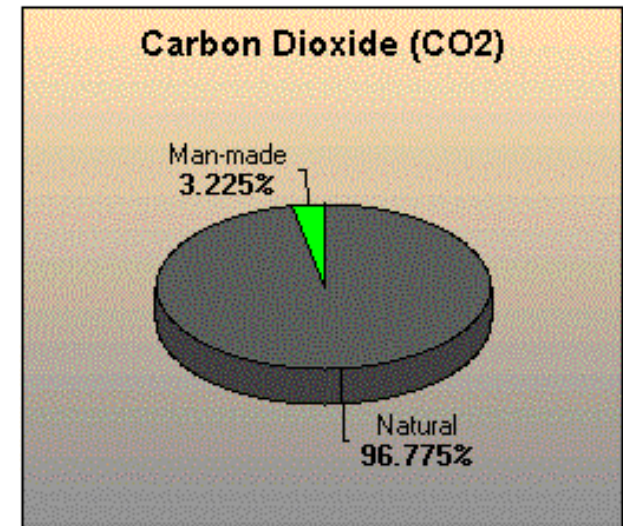
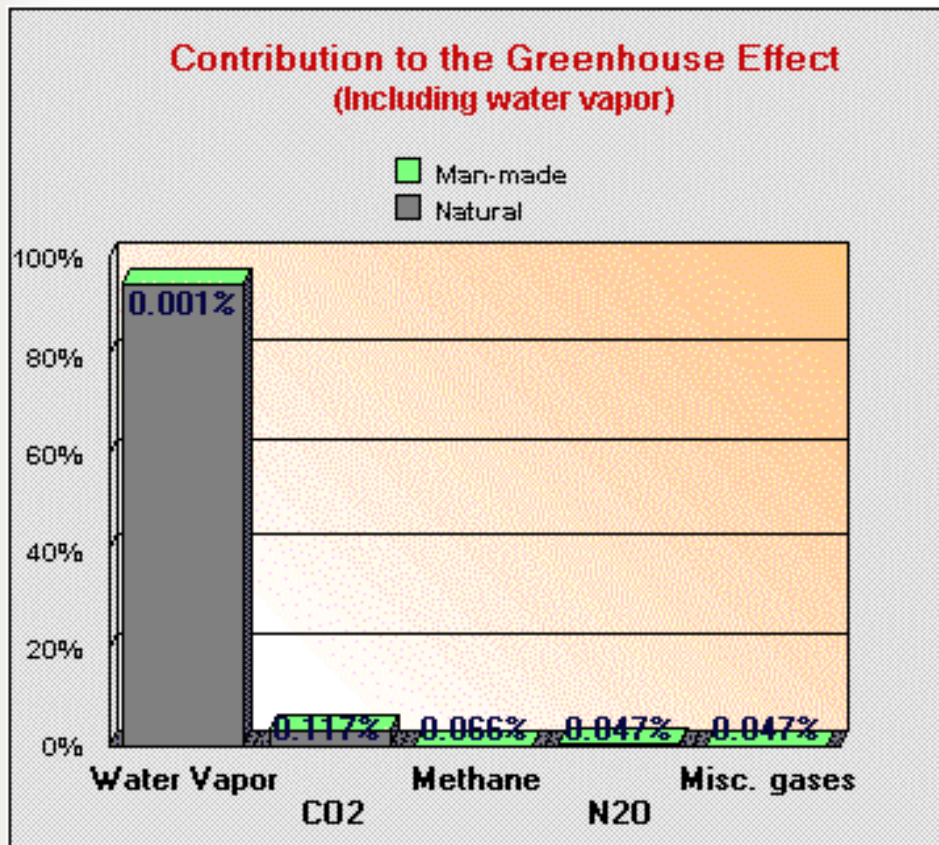
Based on concentrations (ppb) adjusted for heat retention characteristics	% of All Greenhouse Gases	% Natural	% Man-made
Water vapor	95.000%	94.999%	0.001%
Carbon Dioxide (CO ₂)	3.618%	3.502%	0.117%
Methane (CH ₄)	0.360%	0.294%	0.066%
Nitrous Oxide (N ₂ O)	0.950%	0.903%	0.047%
Misc. gases (CFC's, etc.)	0.072%	0.025%	0.047%
Total	100.00%	99.72	0.28%

Greenhouse Gases (no Water Vapor)



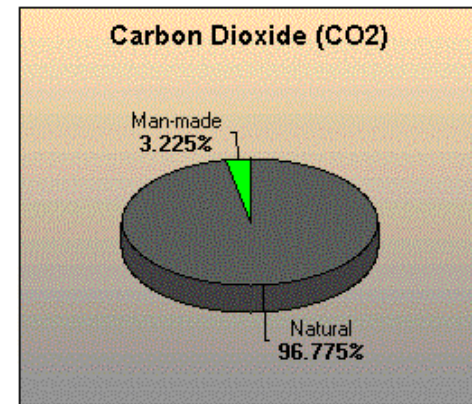
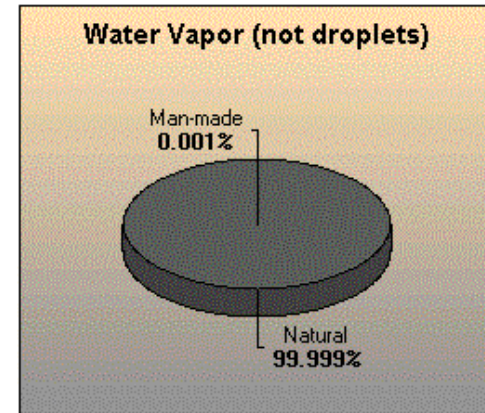
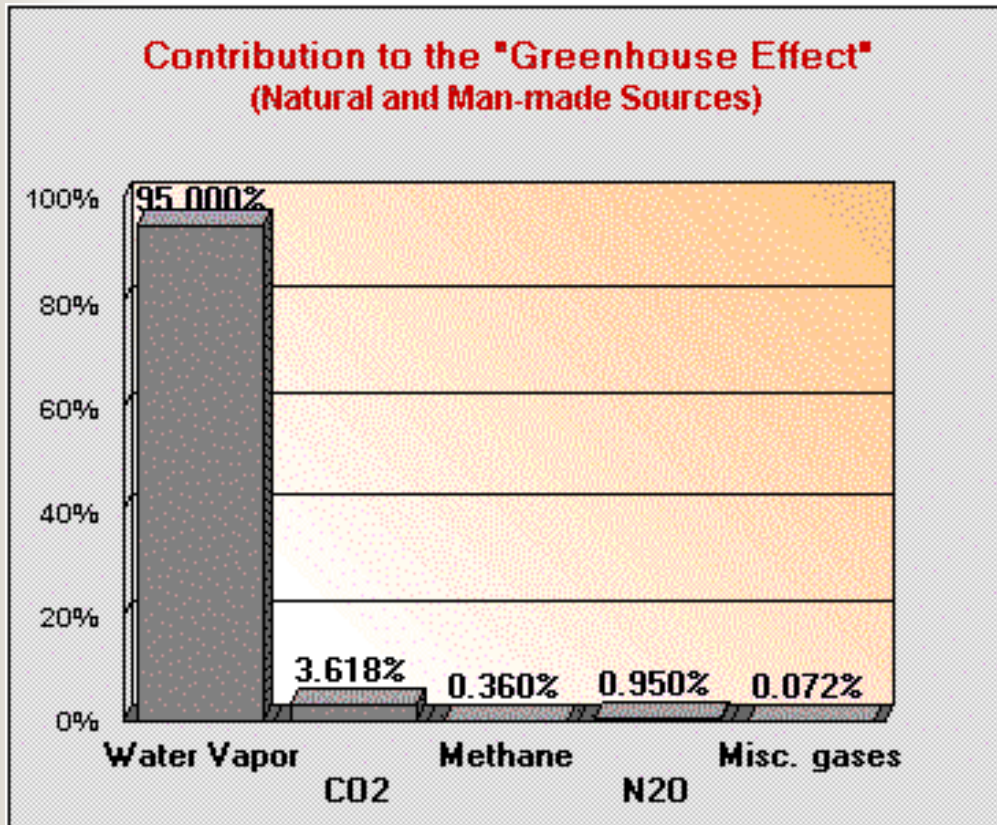
Greenhouse Gases (with Water Vapor)





Human contribution to greenhouse effect = 0.28%

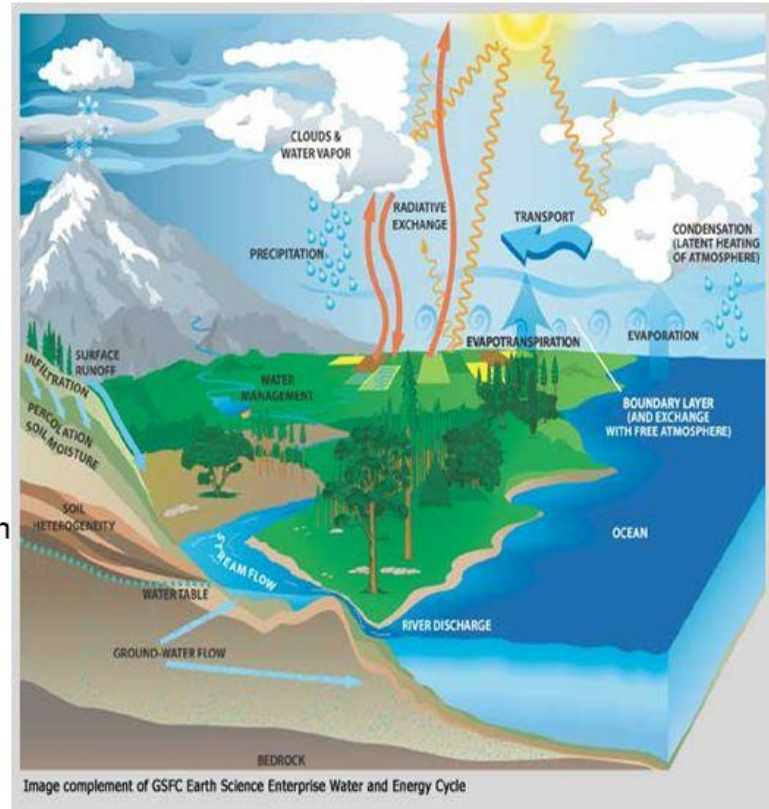
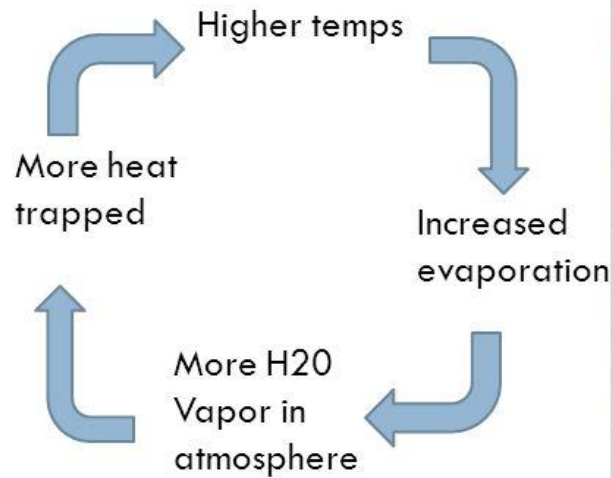
Natural & Manmade Sources



Man-made CO₂ contributions cause only about **0.117%** of Earth's **greenhouse effect**, (factoring in **water vapor**). This is insignificant!

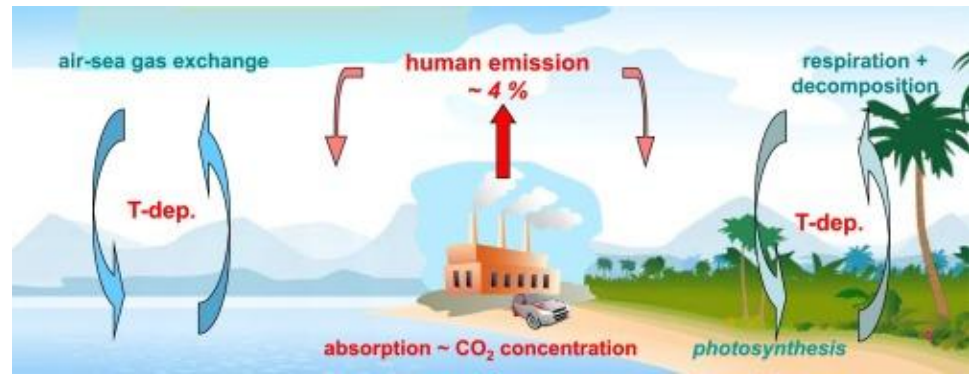
Water Vapor (H₂O)

- Most Abundant greenhouse gas
- Positive Feedback Cycle



CO₂ Residence Time in Atmosphere

- Carbon cycle with an uptake proportional to the CO₂ concentration.
- Temperature dependent natural emission and absorption rates are considered.
- The average residence time of CO₂ in the atmosphere is found to be 4 years.
- Paleoclimatic CO₂ variations and the actual CO₂ growth rate are well reproduced.
- Human emissions only contribute 15 % to the CO₂ increase over the Industrial Era.



UN IPCC Charter

The [Intergovernmental Panel on Climate Change] IPCC's charter

from the outset has been "to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of **human-induced** climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy. ... may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies."





UN IPCC Reports

- Report #1 in 1990: Ignored satellite data (showed no warming)
- Report #2 in 1995: Significant alterations after approval by scientists
- Report #3 in 2001: Claimed 20th century showed “unusual warming”
- Report #4 in 2007: Completely devaluated climate changes in solar activity
- Report #5 in 2014: Confidence increased to 90-95% despite no global warming for 15 years

UN IPCC Reality



“We (UN-IPCC) redistribute de facto the world’s wealth by climate policy...”

“One has to free oneself from the illusion that international climate policy is environmental policy. This has almost nothing to do with environmental policy anymore...”

-Dr. Ottmar Endenhofer, IPCC co-chair of Working Group 3, November 13, 2010 interview [H/t Dr. Charles Battig]

Hey Climate Marchers:

"POLAR BEARS AT HIGHEST POPULATION LEVELS IN 50 YRS"

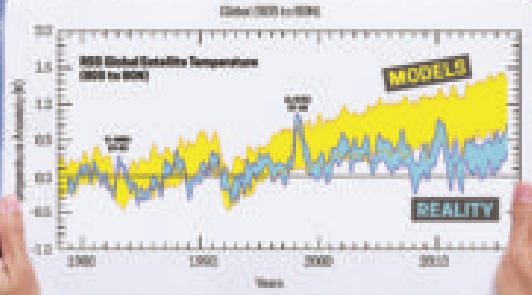


CFACT

Dr. Susan Cookland
Univ. of Waterloo

ACTUAL DATA REFUTE CLIMATE MODELS

Hey Climate Marchers:



DON'T BE HUSTLED BY GLOBAL WARMING HYPE!

CFACT

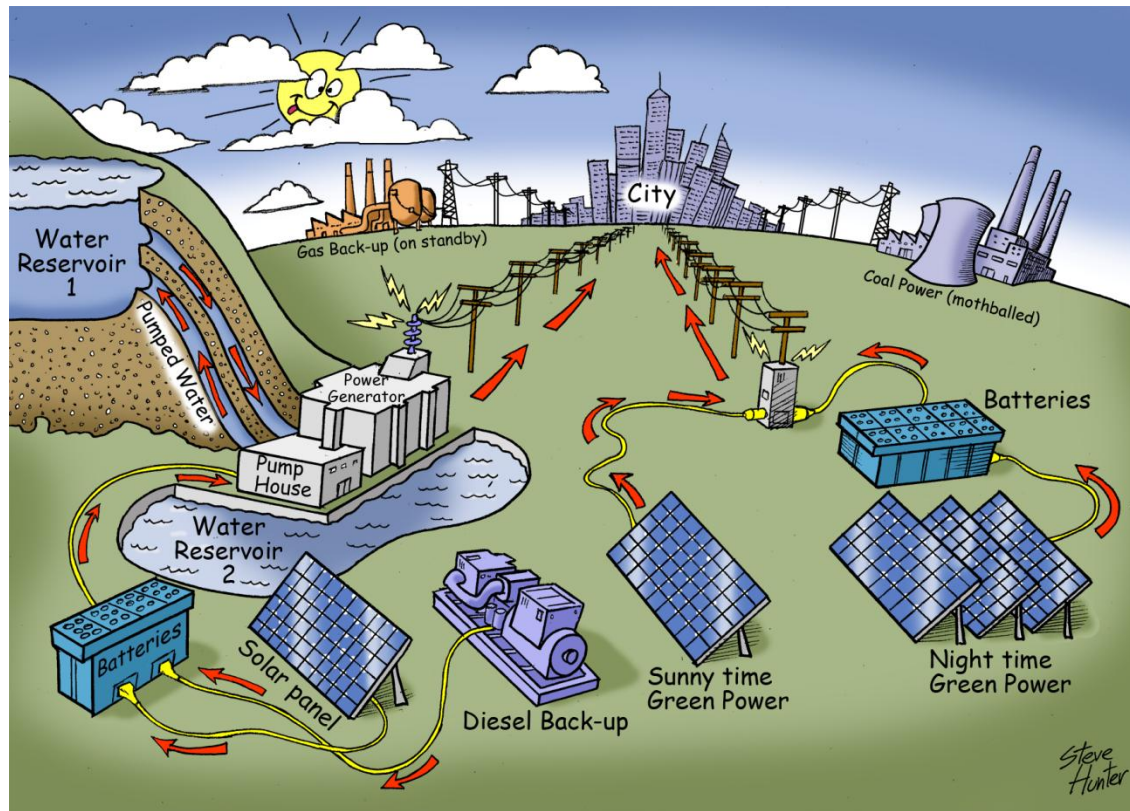
Hey Climate Marchers:

THE SCIENCE IS SETTLED. YOU'RE BEING HUSTLED!

CLIMATE HOSTILE

ClimateHustle.com

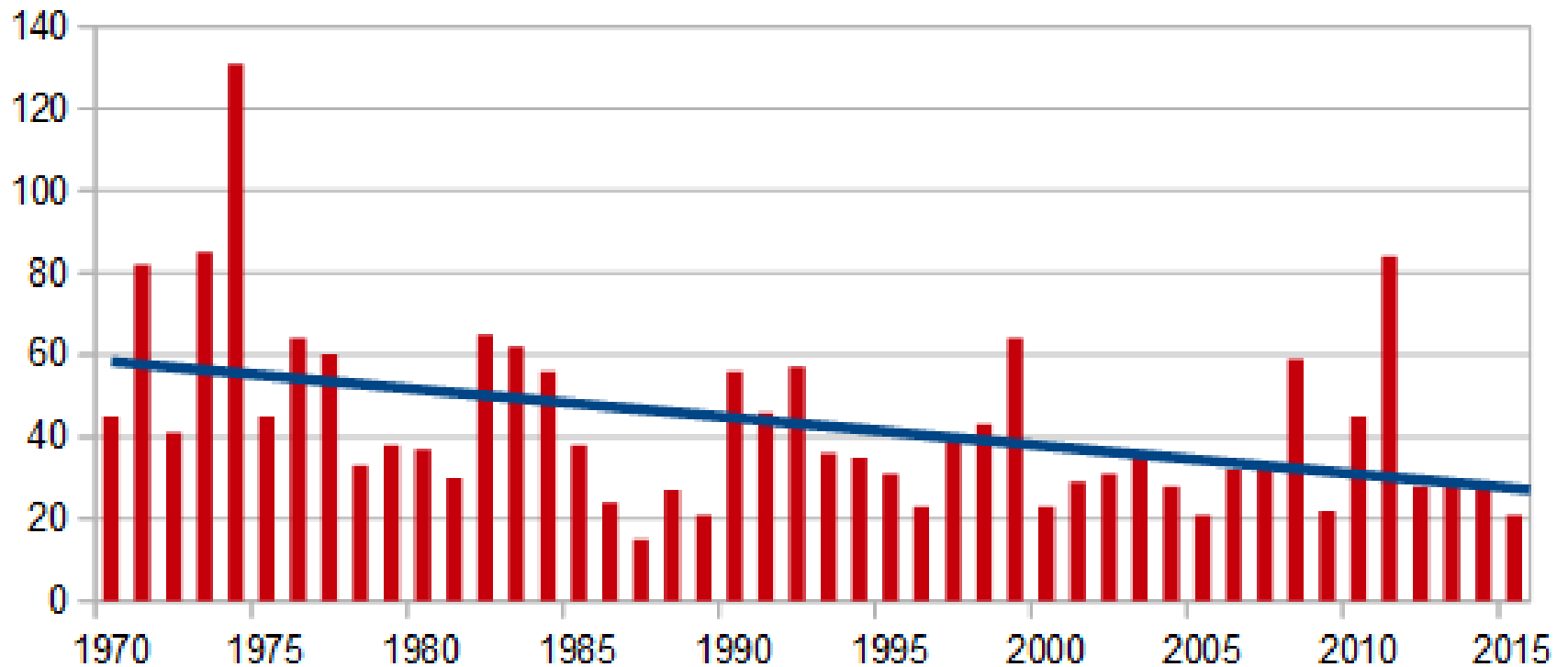
Backup Battery Requirements



US Tornadoes

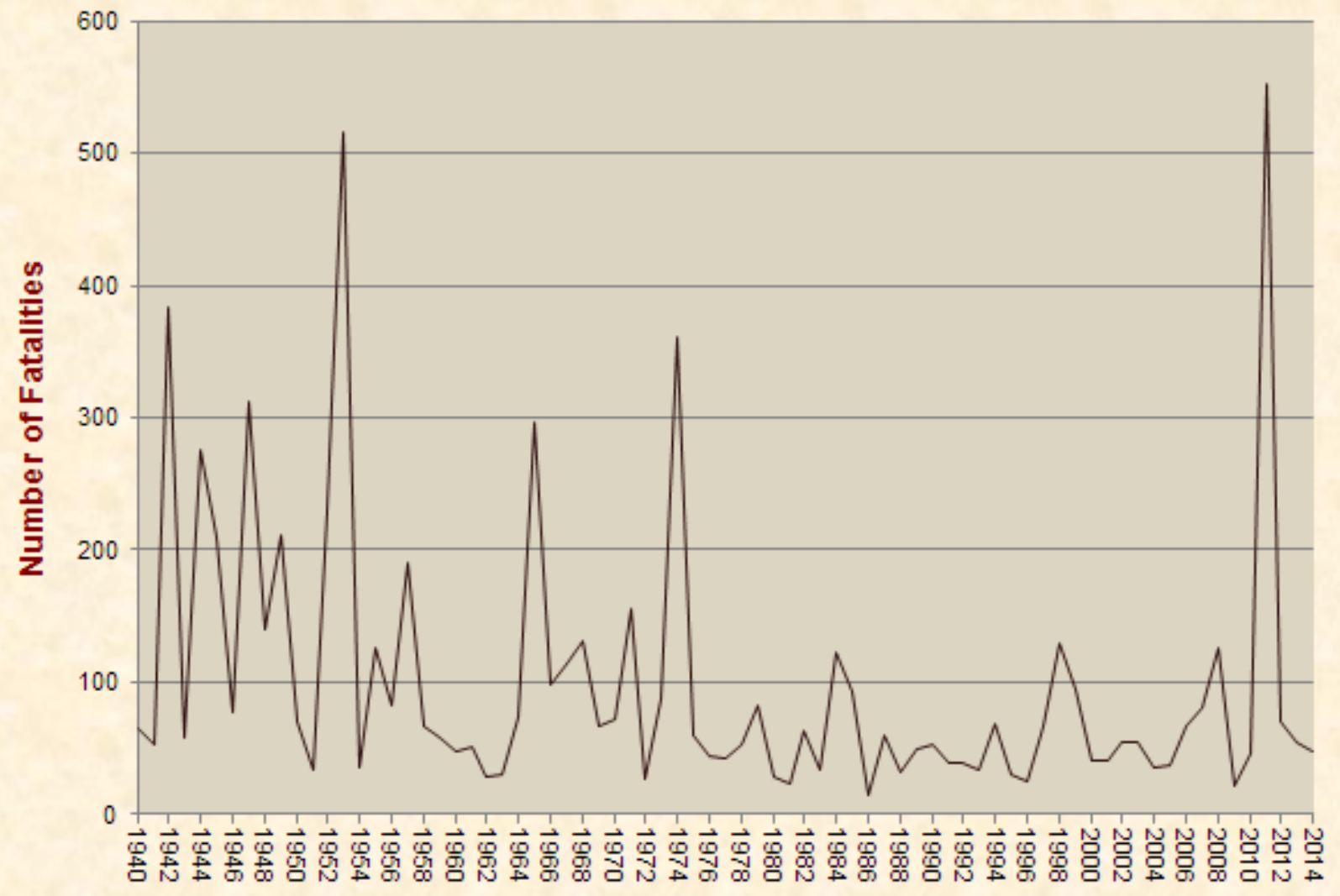
Annual Count of US Tomadoes EF-3 and Stronger

1970 to 2015



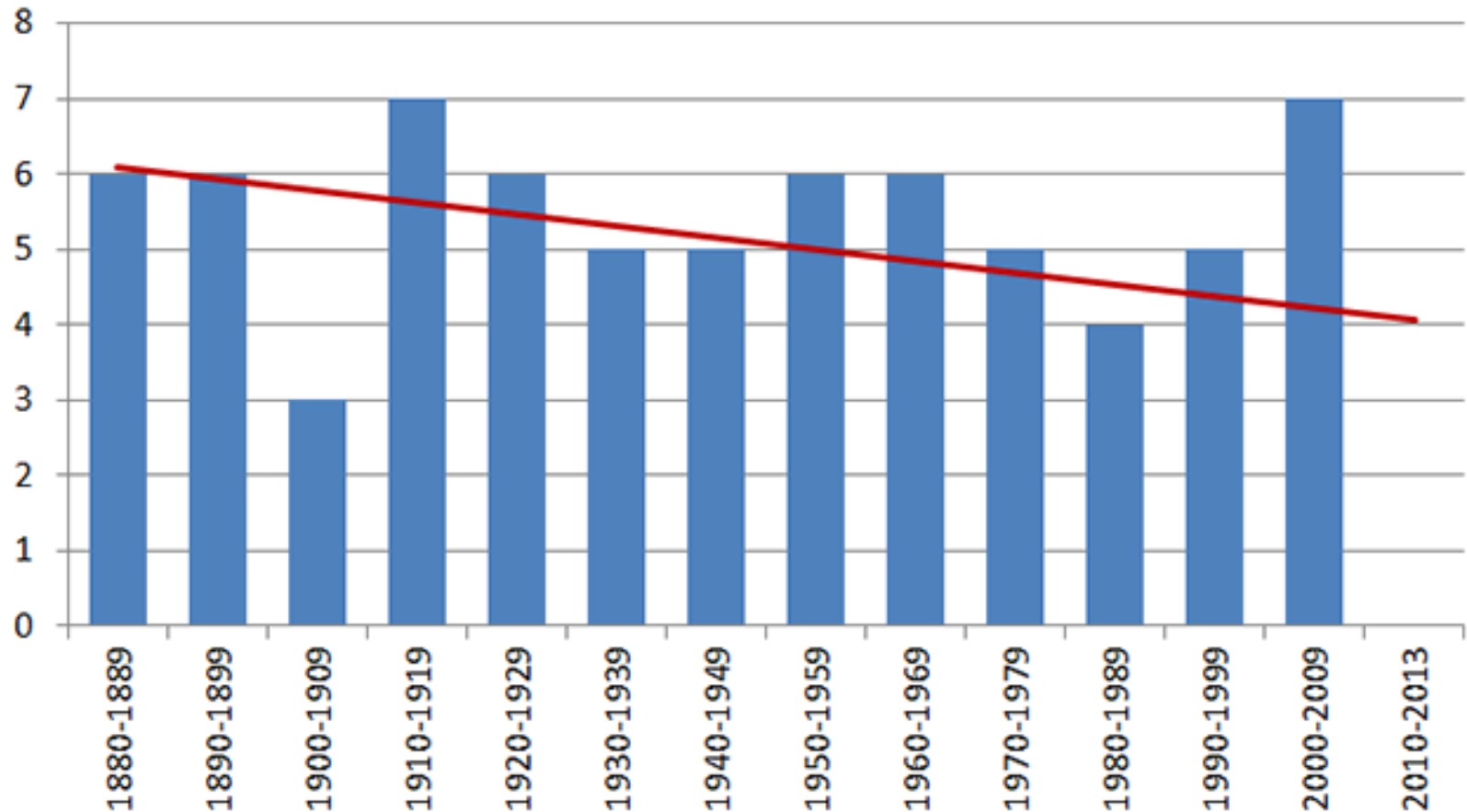


United States Tornado Fatalities



Intense Hurricanes since 1880 by Decade

(Cat 3,4,5 - <http://www.nhc.noaa.gov/data/>)



Global Warming and Hurricanes

An Overview of Current Research Results

1. Has Global Warming Affected Hurricane or Tropical Cyclone Activity?

Geophysical Fluid Dynamics Laboratory/NOAA

Last Revised: Mar. 17, 2017

A. Summary Statement

Two frequently asked questions on global warming and hurricanes are the following:

- Have humans already caused a detectable increase in Atlantic hurricane activity or global tropical cyclone activity?
- What changes in hurricane activity are expected for the late 21st century, given the pronounced global warming scenarios from current IPCC models?

In this review, we address these questions in the context of published research findings. We will first present the main conclusions and then follow with some background discussion of the research that leads to these conclusions. The main conclusions are:

It is premature to conclude that human activities—and particularly greenhouse gas emissions that cause global warming—have already had a detectable impact on Atlantic hurricane or global tropical cyclone activity. That said, human activities may have already caused changes that are not yet detectable due to the small magnitude of the changes or observational limitations, or are not yet confidently modeled (e.g., aerosol effects on regional climate).

- Anthropogenic warming by the end of the 21st century will likely cause tropical cyclones globally to be more intense on average (by 2 to 11% according to model projections for an IPCC A1B scenario). This change would imply an even larger percentage increase in the destructive potential per storm, assuming no reduction in storm size.
- There are better than even odds that anthropogenic warming over the next century will lead to an increase in the occurrence of very intense tropical cyclone in some basins—an increase that would be substantially larger in percentage terms than the 2-11% increase in the average storm intensity. This increase in intense storm occurrence is projected despite a likely decrease (or little change) in the global numbers of all tropical cyclones.
- Anthropogenic warming by the end of the 21st century will likely cause tropical cyclones to have substantially higher rainfall rates than present-day ones, with a model-projected increase of about 10-15% for rainfall rates averaged within about 100 km of the storm center.

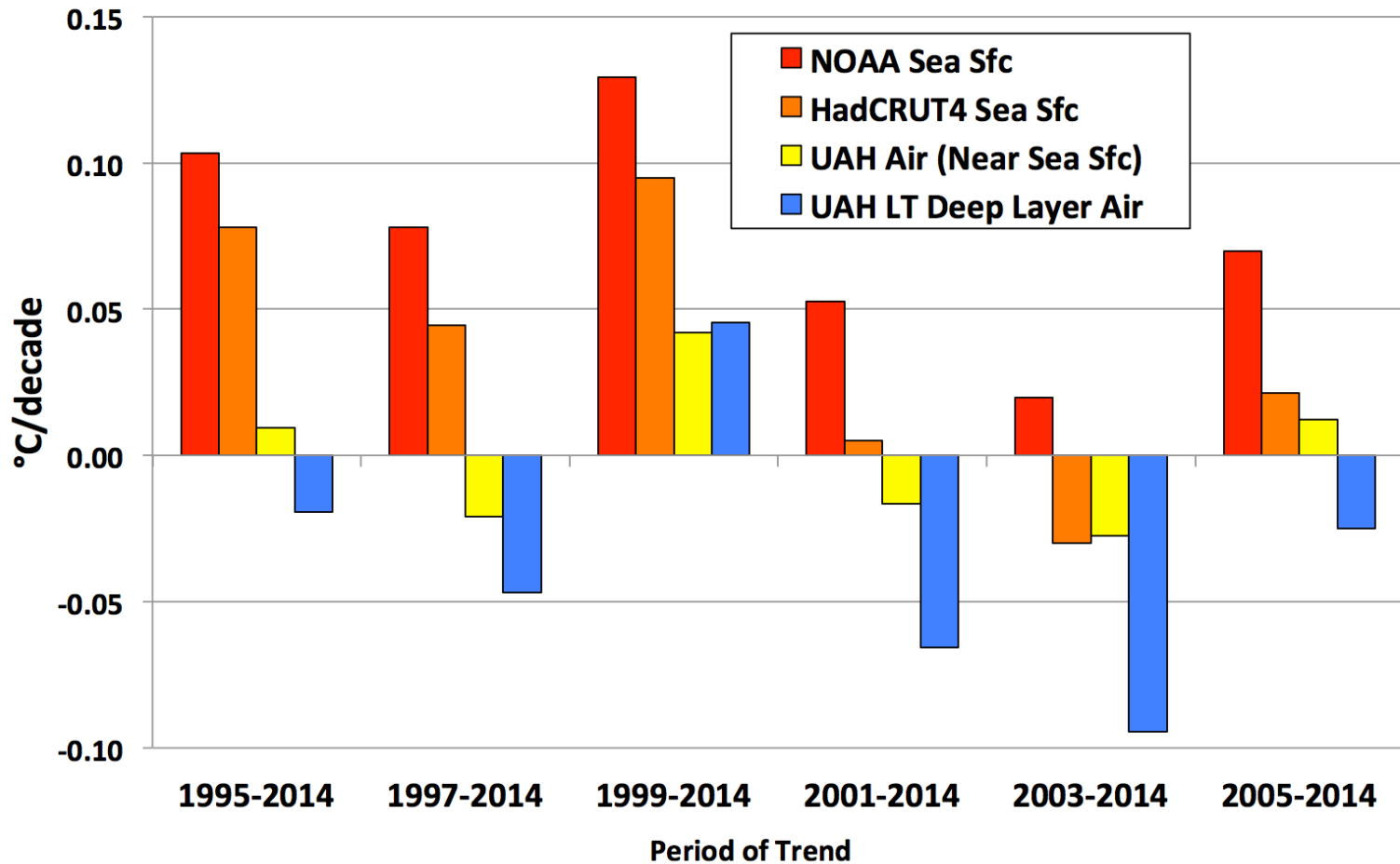
Related Links:

For more information and related research see:

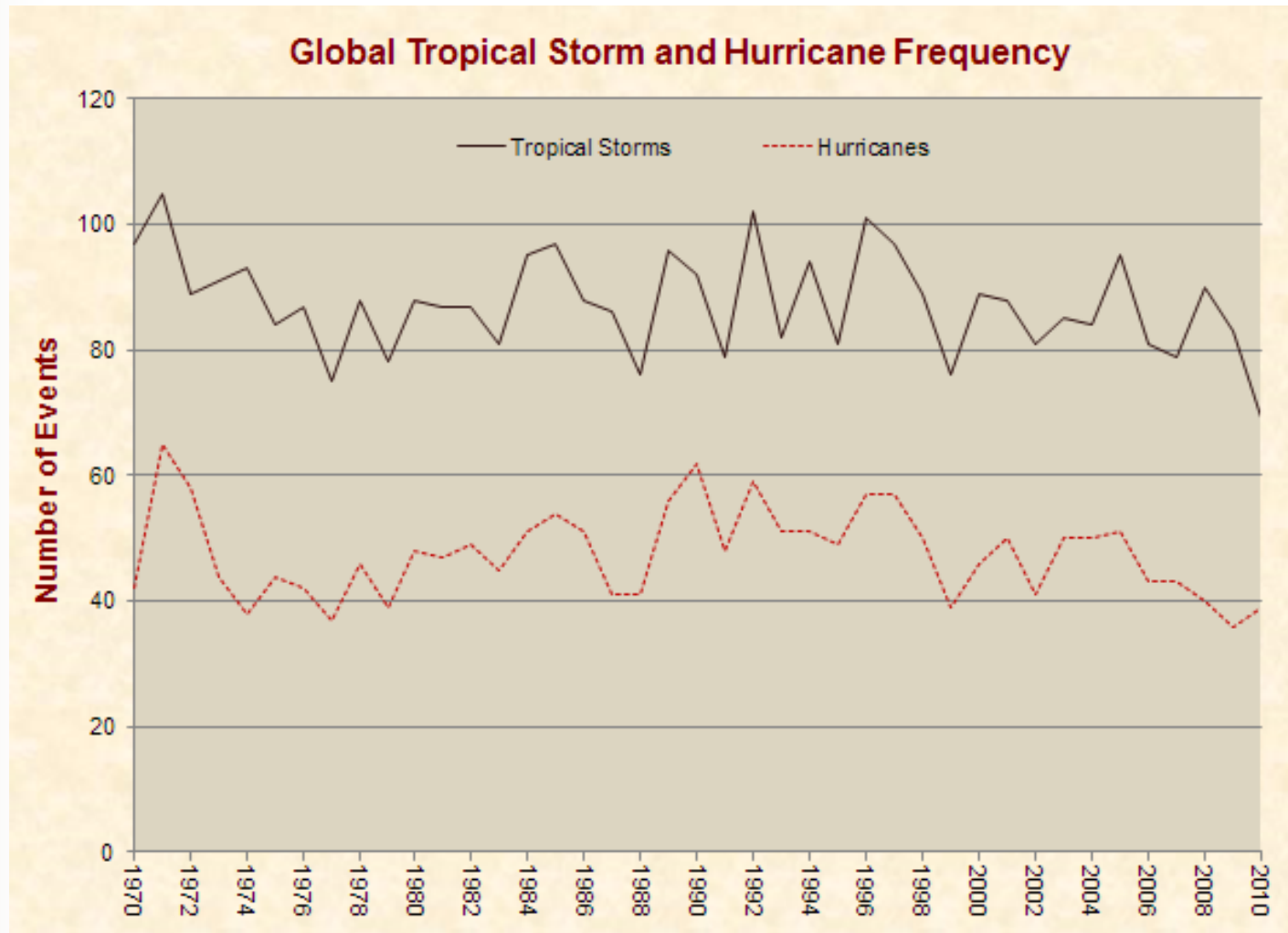
- ["Tropical Cyclones and Climate Change"](#), an assessment by a World Meteorological Organization Expert Team on Climate Change Impacts on Tropical Cyclones. For more information on the expert team, see this [WMO web page](#).
- [Future projections of global tropical cyclone activity \(J. Climate 2015\)](#).
- [Future projections of intense Atlantic hurricanes \(J. Climate 2013\)](#).
- [Global models of hurricane frequency](#) developed at GFDL.
- [Historical changes in Atlantic hurricanes and tropical storms](#).
- [GFDL's Hurricane Portal](#)
- [GFDL Hurricane simulations—animations](#)
- [GFDL Climate Research Highlights web page](#).
- [Hurricanes: Science and Society web page](#)
- [NOAA State of the Science Fact Sheet on "Atlantic Hurricanes, Climate Variability, and Global Warming"](#) (May 2012)



Trends in Ocean Temperatures (20S-60N) 10 to 20 Year periods ending in 2014

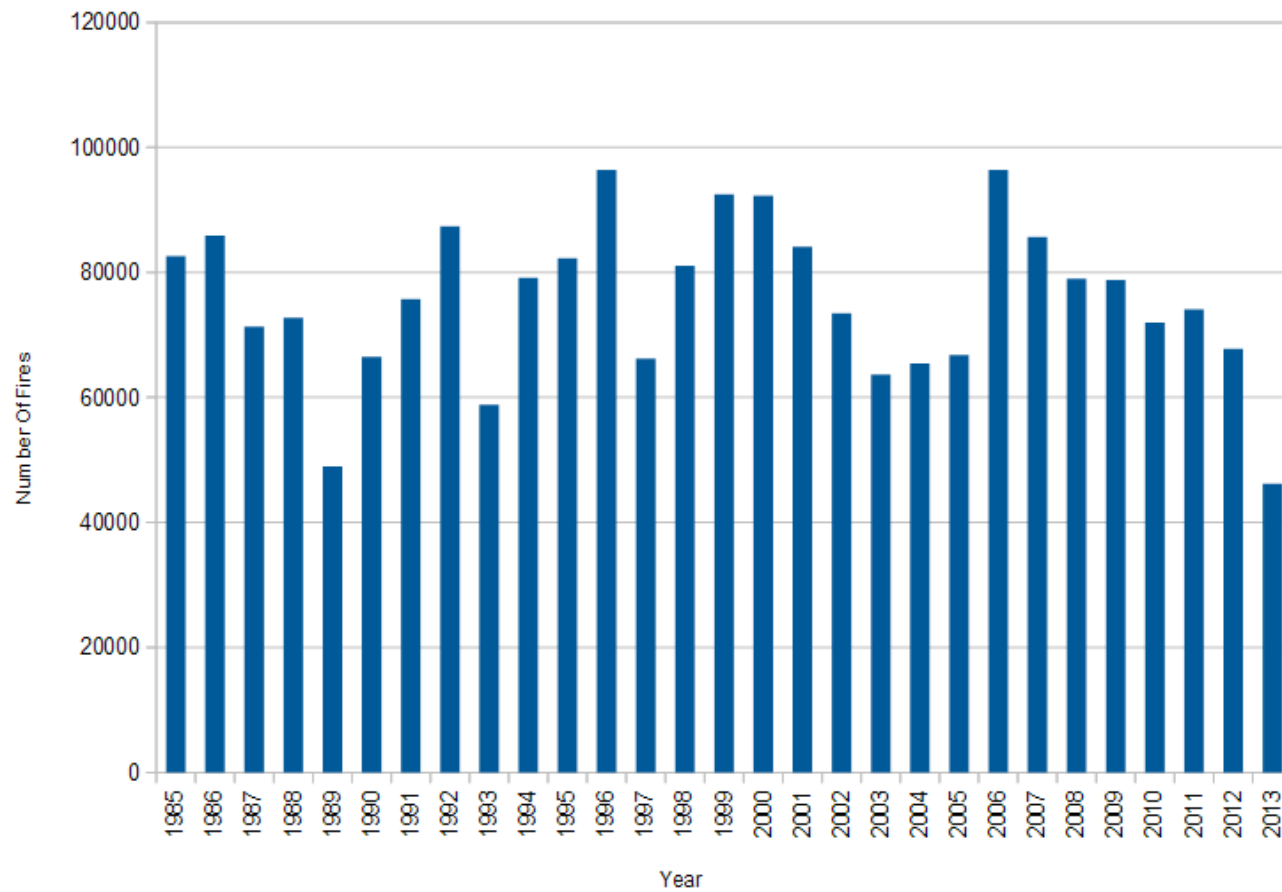


Extreme Weather?

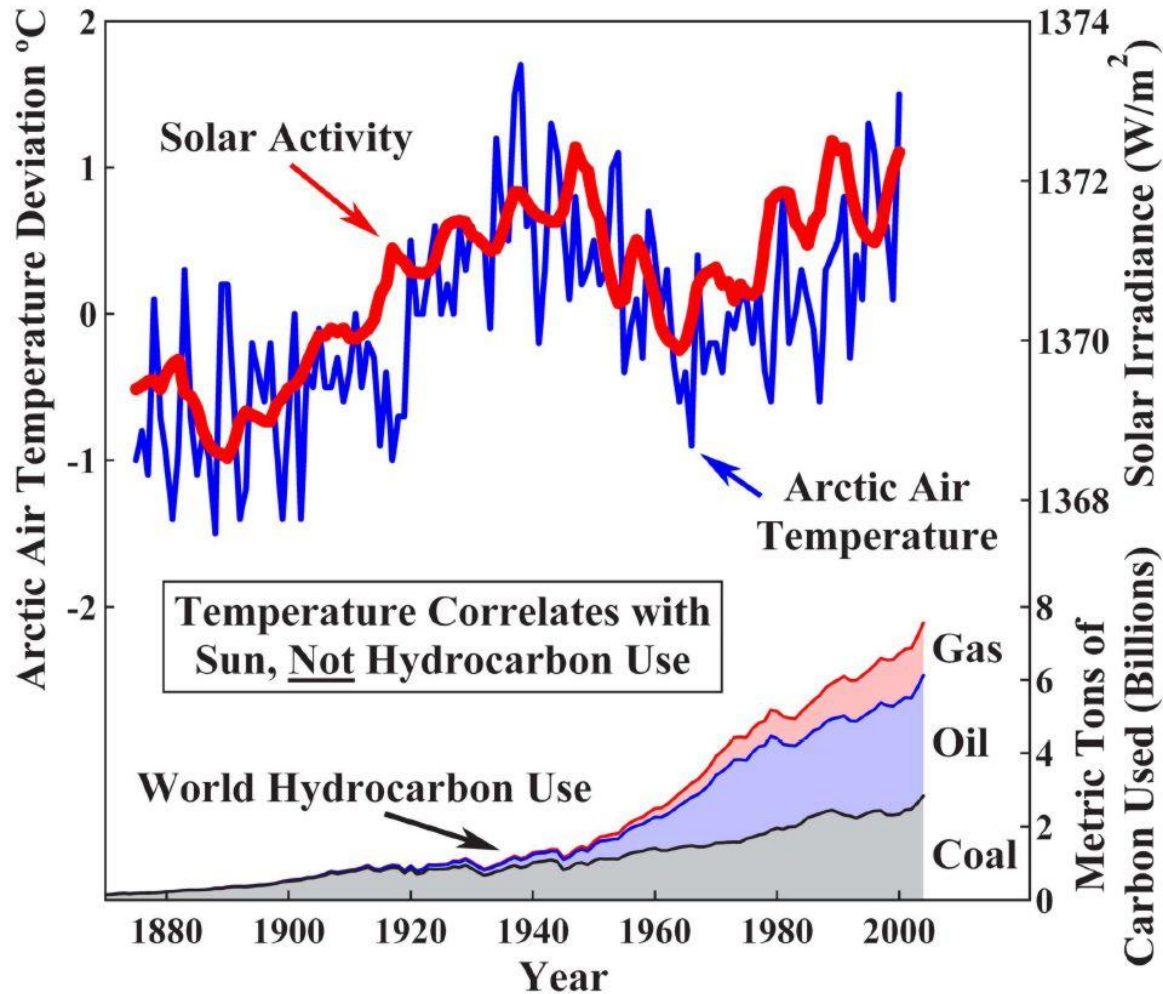


Frequency of U.S. Wildfires

US Forest Fire Count

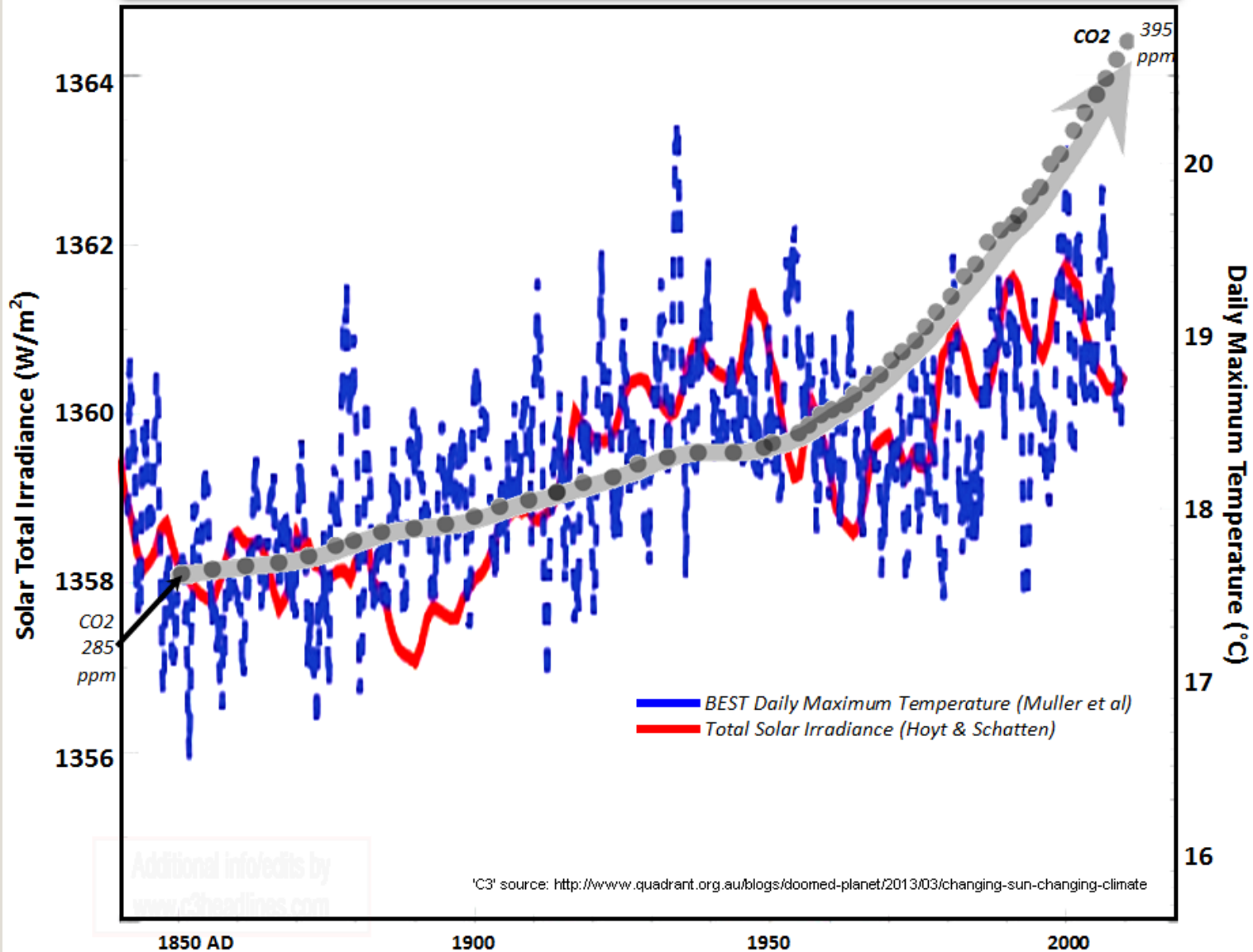


Temperature Correlation With Sun

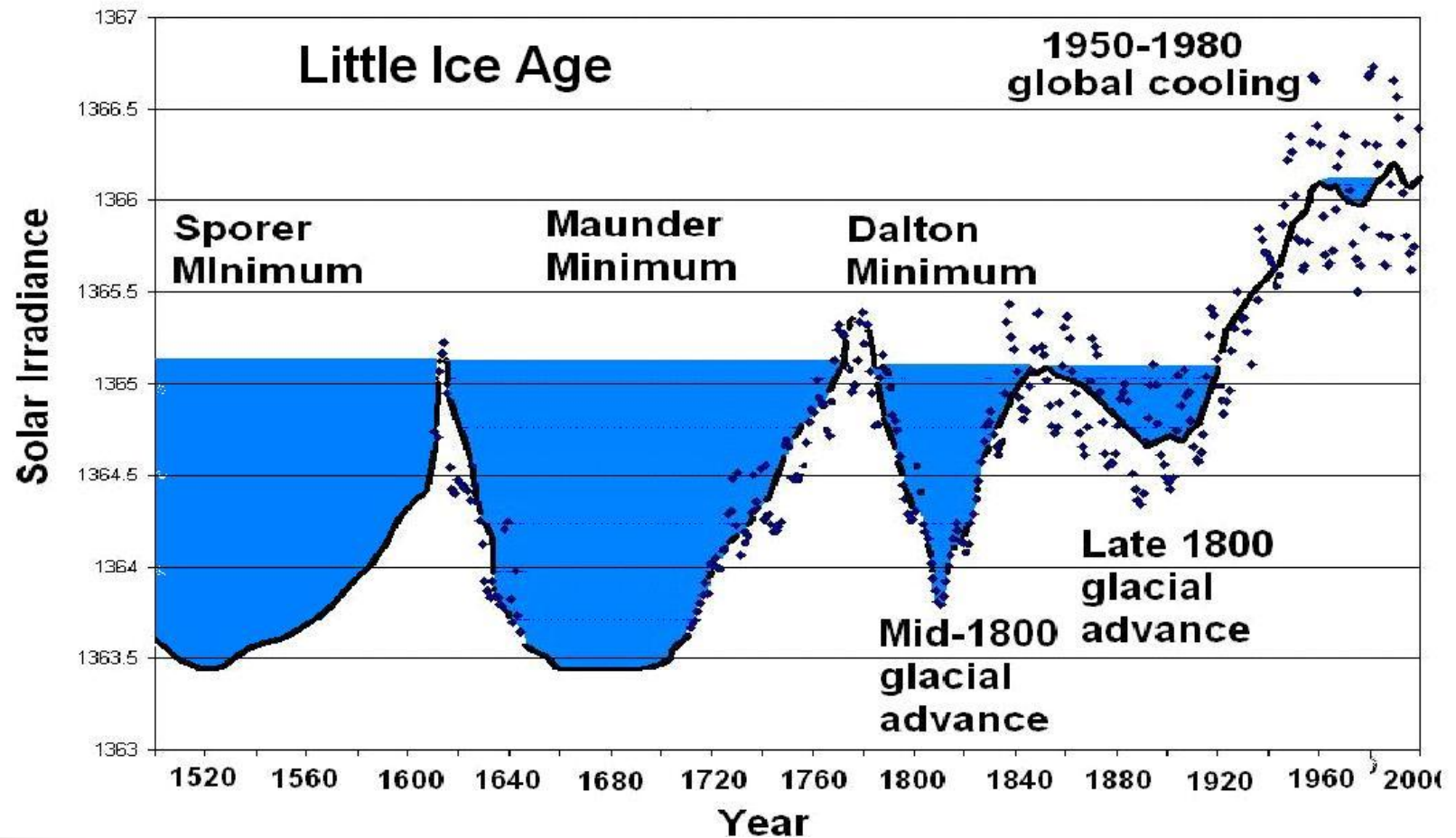


Solar Activity Closely Related To Climate Temperature Change

CO2 levels have a weak influence on U.S. maximum temperatures

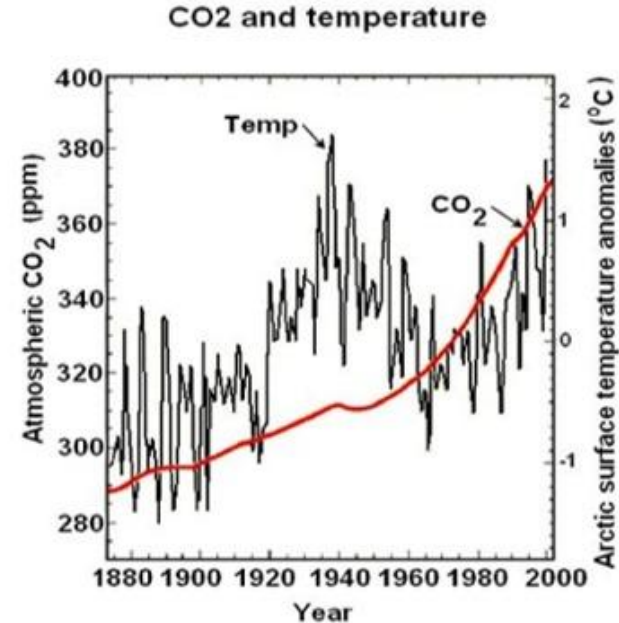
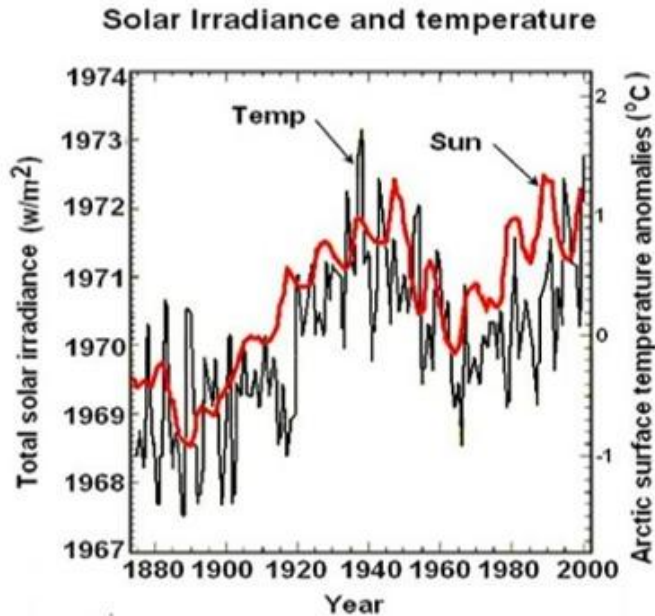


Solar Irradiance/Sunspots & Glaciers

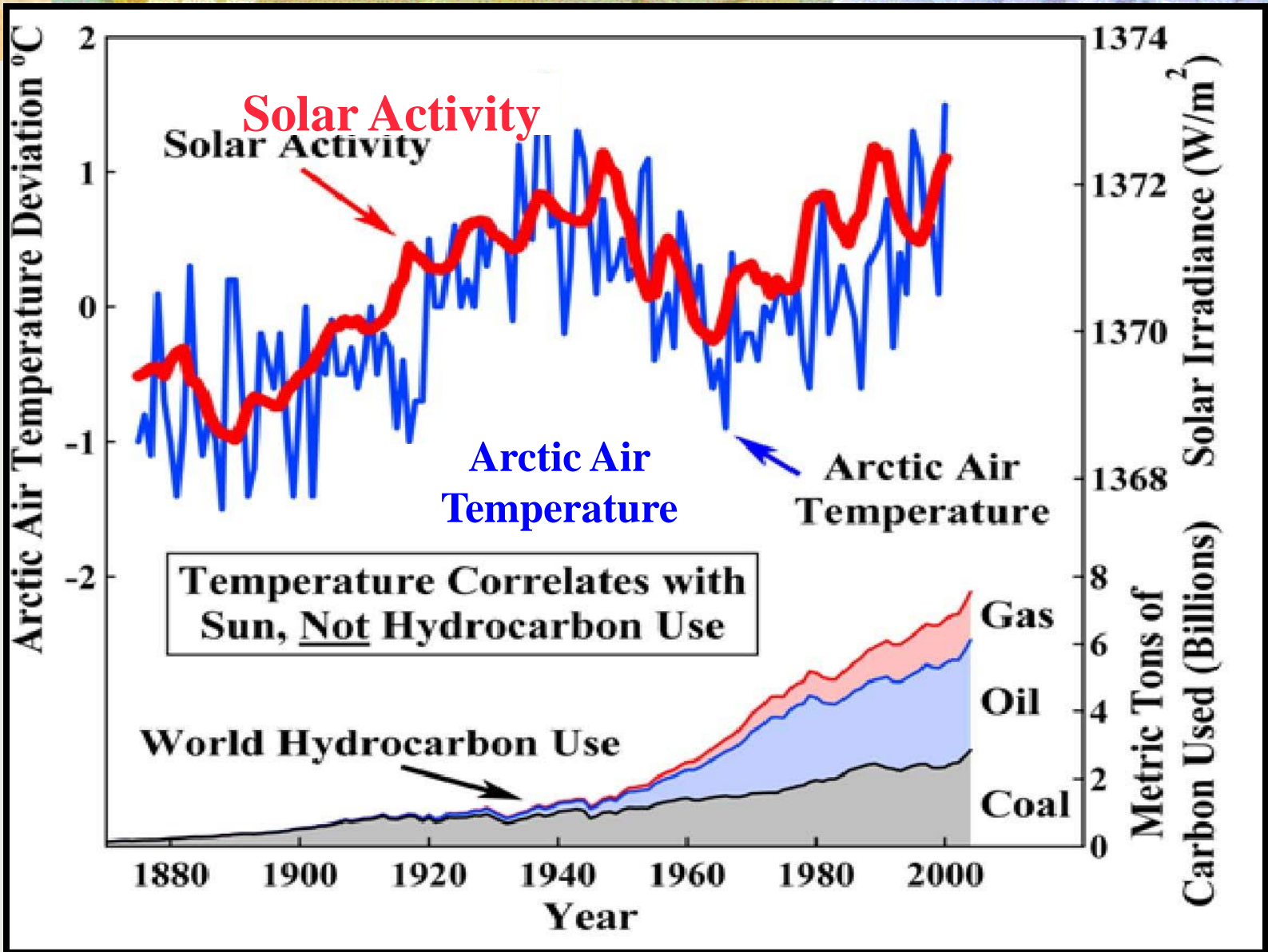


Natural Cause – Sun?

The following charts show clearly that climate change seems to be directly correlated to Solar Irradiance, rather than CO₂, as the "Global Warming Crisis" alarmist crowd would have you think.

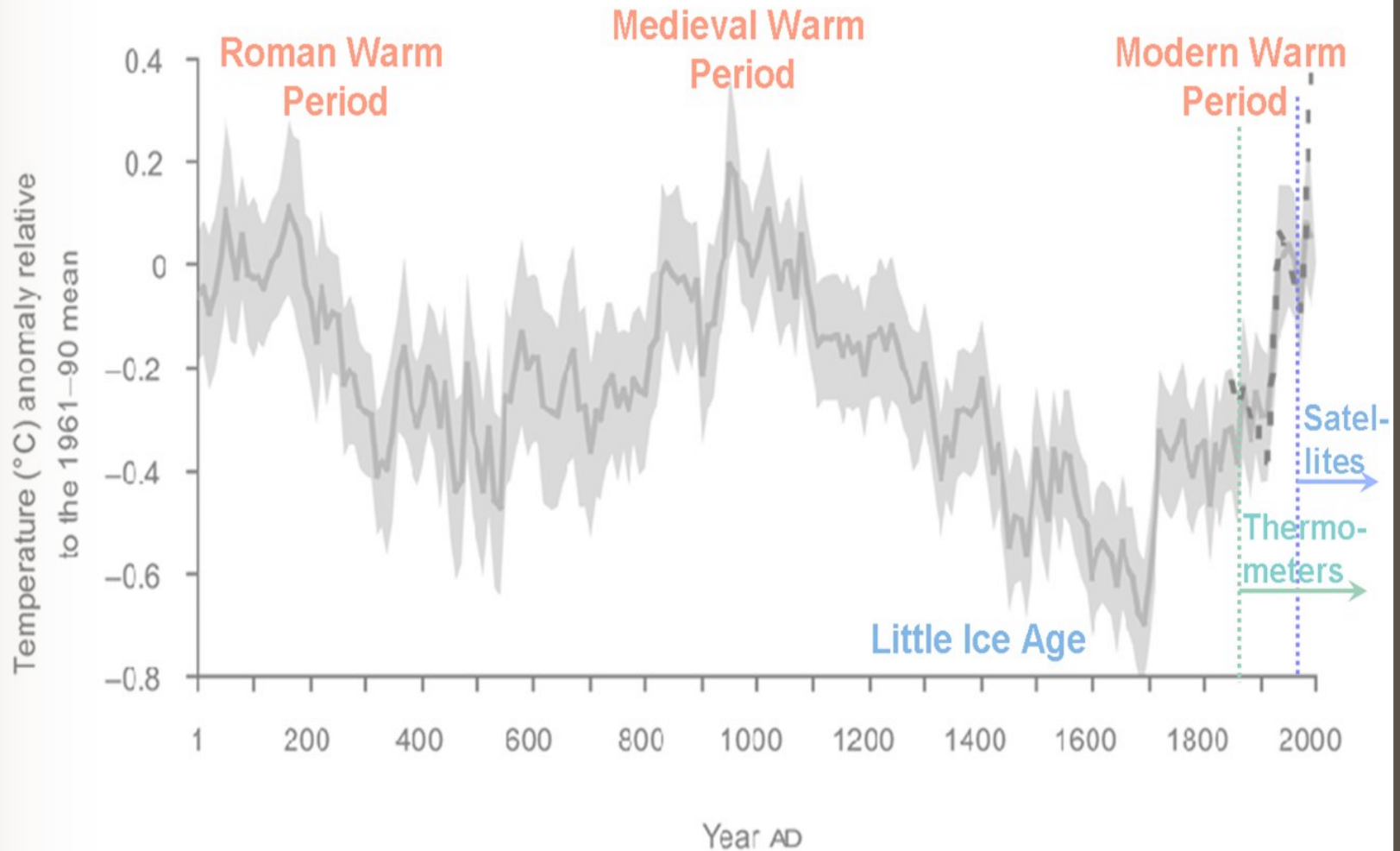


Modified from Soon, 2004

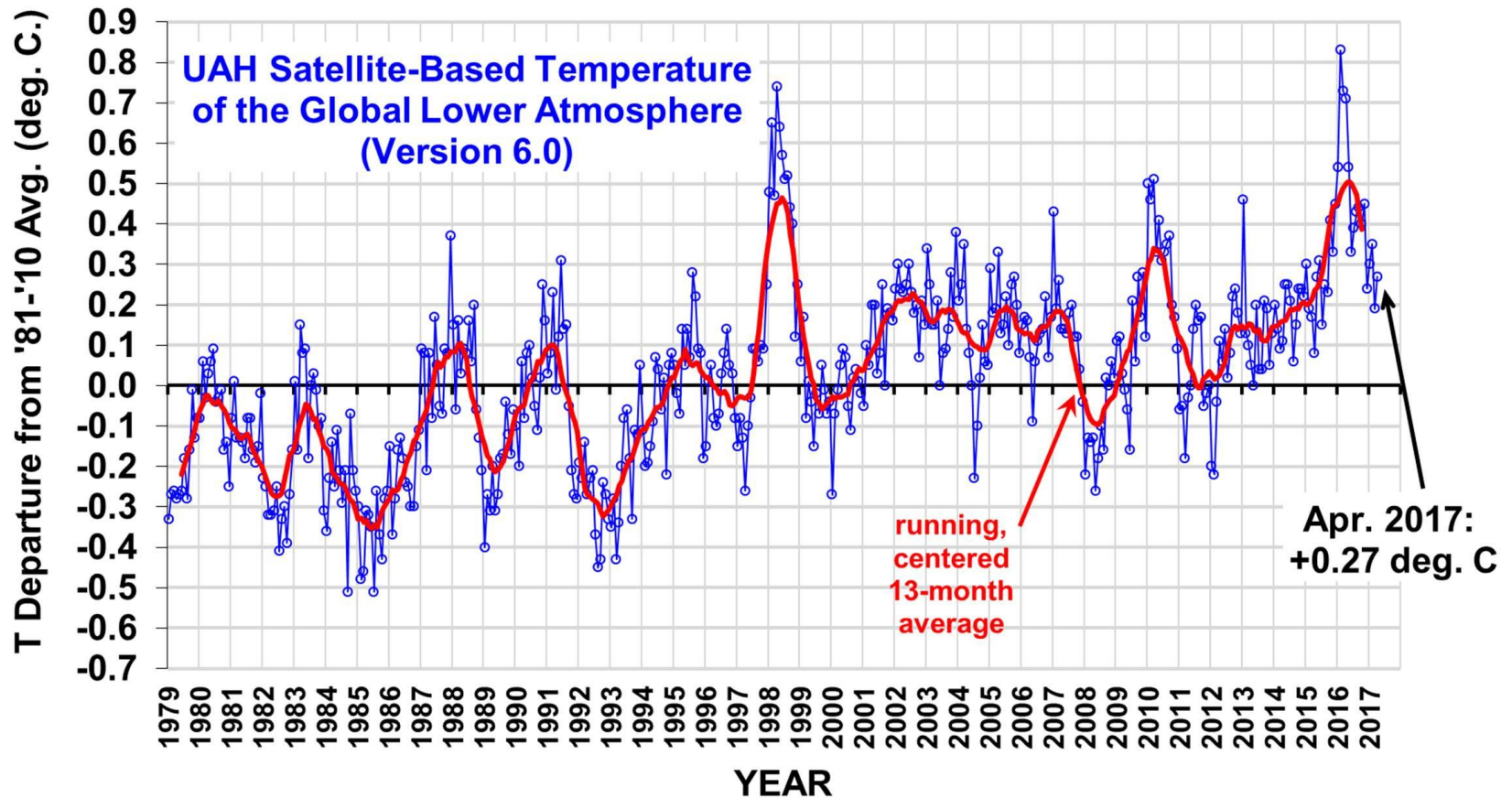


30-year cooling in mid-century

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



Satellite-Based Temperature





Paris Climate Agreement

- Work of the UN Framework Convention on CC
- Deals with Green House Gas emissions mitigation, adaptation and finance
- Adopted on December 12, 2015
- Start planned for 2020
- Signed by 195 nations, ratified by 144
- Implementation implications
 - Prevent 0.306 degrees Fahrenheit of GW by 2100
 - At a cost of \$65 to \$132 Trillion, 2030 to 2100

COP21 final deal: Key points...

- COP21 President Laurent Fabius says text is "differentiated, balanced, durable and "legally-binding"
- Text "emphasises" need to keep warming "well below 2C"
- ... And "Pursuing" efforts to keep warming "below 1.5C"
- 5-year 'stocktake' of how countries are doing on their climate plans
- Issues of 'Differentiation' and 'Loss & Damage' included
- No clear timescale of when fossil fuels must be phased out



SIX KEY POINTS OF THE PARIS CLIMATE AGREEMENT

The 31-page document that details a landmark agreement reached in Paris on 12 December 2015 could be a turning point in the struggle to contain global warming. The historic pact, approved by 195 countries, will take effect from 2020.



To keep global **temperature** increase below 2C (3.6F) and to pursue efforts to limit it to 1.5C.



186 countries submitted plans detailing how they reduce their **greenhouse gas pollution** through 2025 or 2030.



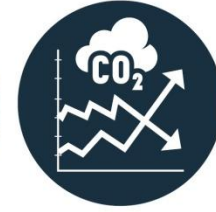
Overall assessment of how countries are doing in cutting their emissions compared to their **national plans** – starting in 2023, every five years.



\$100 billion a year in climate finance for developing countries by 2020, with a commitment to further finance in the future.



Rich countries to engage in absolute reductions in emissions, developing ones to continue enhancing their mitigation efforts.



Countries should reach global peaking of **greenhouse gas emissions** as soon as possible.

Source: UNEP, Global Trends in Renewable Energy Investment 2015



Emissions Targets for USA & China

- The Obama administration agreed to an economy-wide target of reducing U.S. greenhouse gas (82% of which is carbon dioxide (CO₂)) emissions by 26%-28% below its 2005 level in 2025.
- China agreed “to achieve the peaking of CO₂ emissions around 2030” and to other measures such as those designed to increase the share of non-fossil fuels in primary energy consumption. Taking into consideration expected economic growth in China and other factors, their target translates into about a 70% *increase* above its 2005 level in 2025.

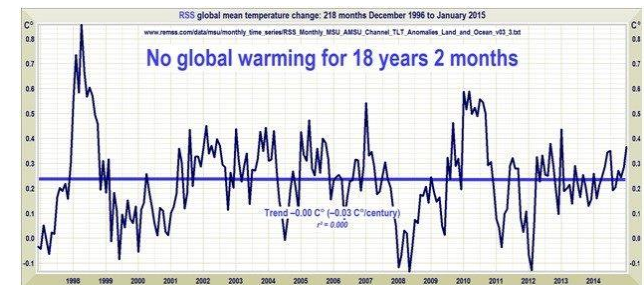
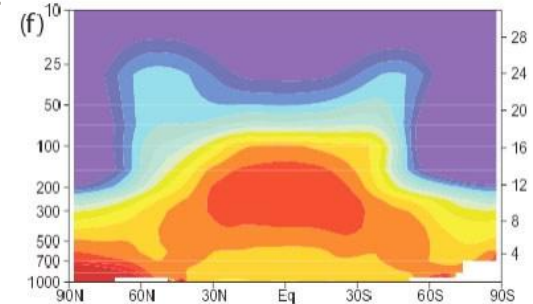


Possible Global Warming Causes

- Increased CO2 in atmosphere?
 - Insignificant GHG, follows GW
- Sunspots?
 - Influence too small by themselves
- Solar Irradiance? ← **Most Likely!**
 - Cloud Cover increase -> Cooling
- Pacific Decadal Oscillation?
 - Occurs every 30 years in North Pacific Ocean

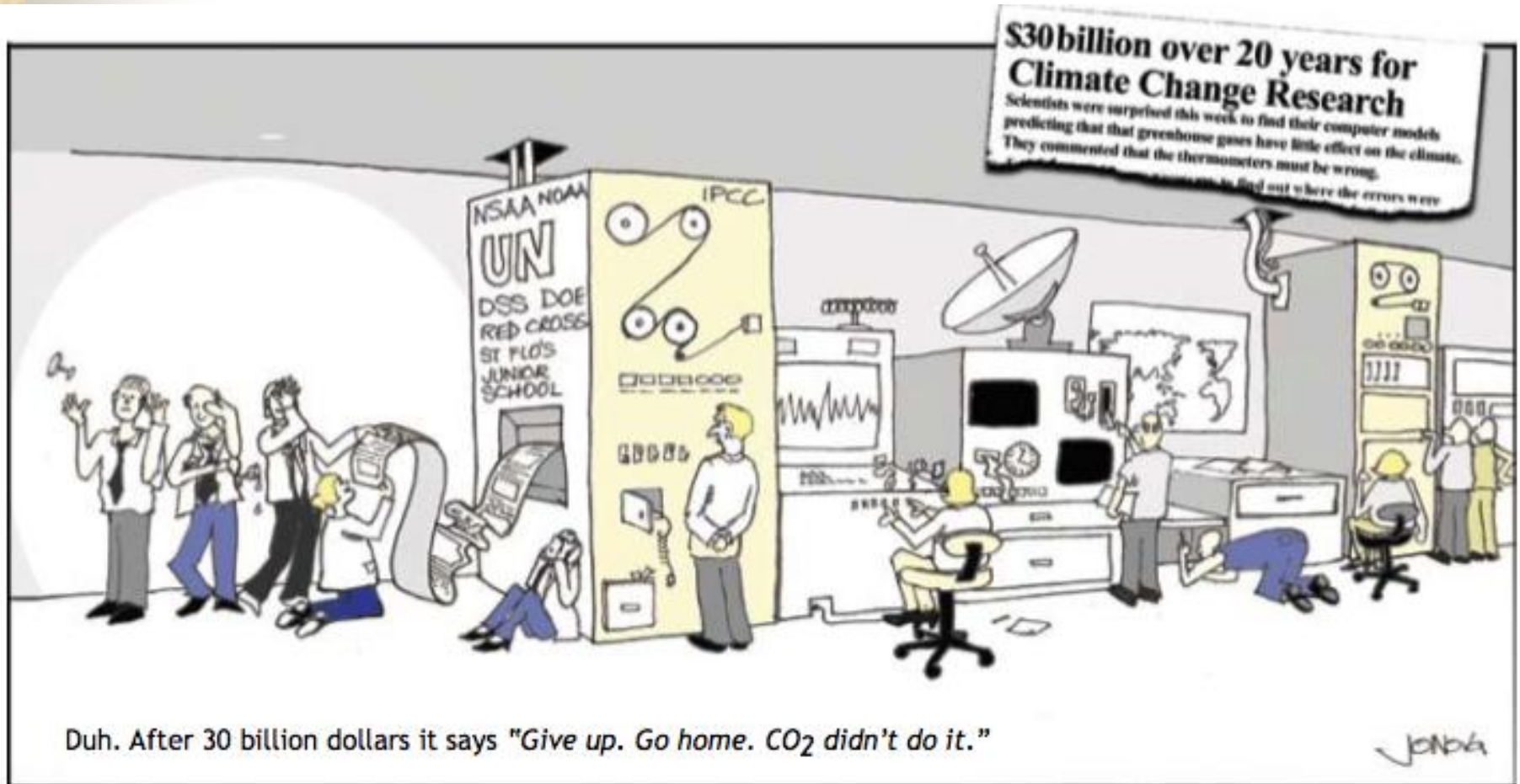
Evidence for AGW by CO2?

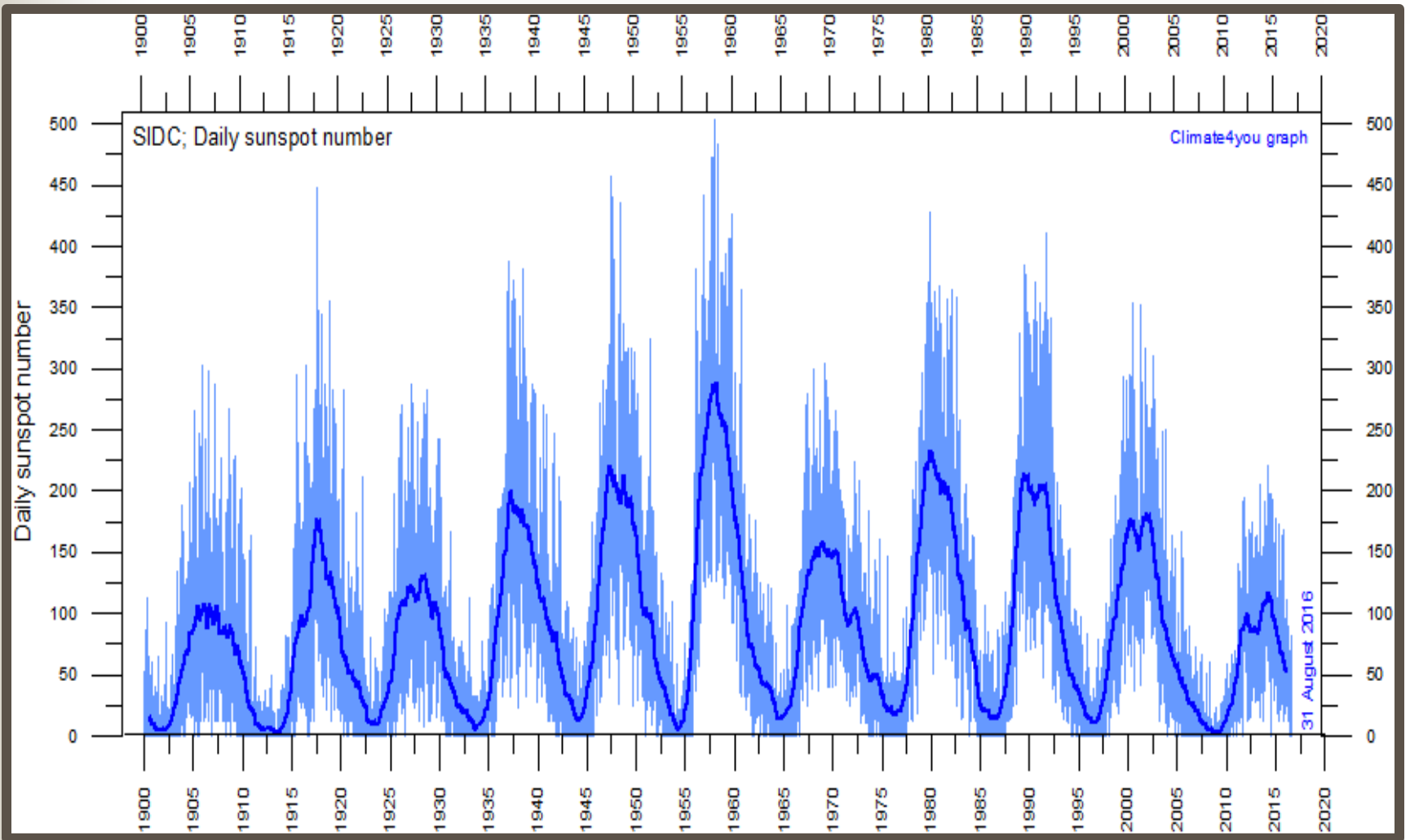
- The greenhouse gas signature missing
 - No telltale “hotspot” warming pattern
- Vostoc ice cores do not show CO2 pushing up temperatures
 - Increased temperatures **800 years before CO2**
- Temperatures are not rising
 - Since 1999 temperatures have been flat
- CO2 already doing almost all the warming it can do
 - Twice the CO2 does not make twice the difference



The Skeptic's Handbook, Joanne Nova 2009

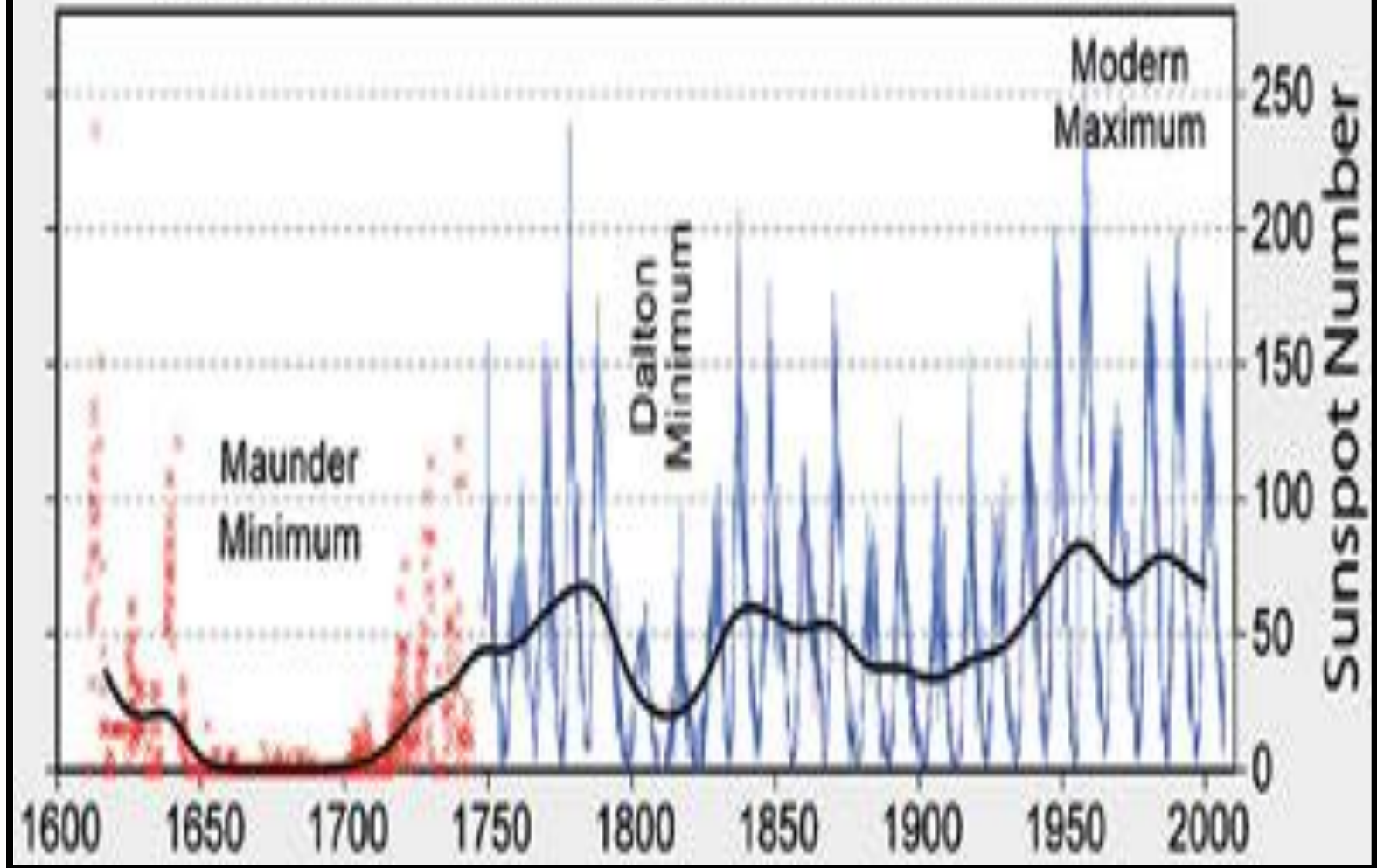
CC Research Results





Daily Sunspot Number

400 Years of Sunspot Observations



Monthly solar sunspot number

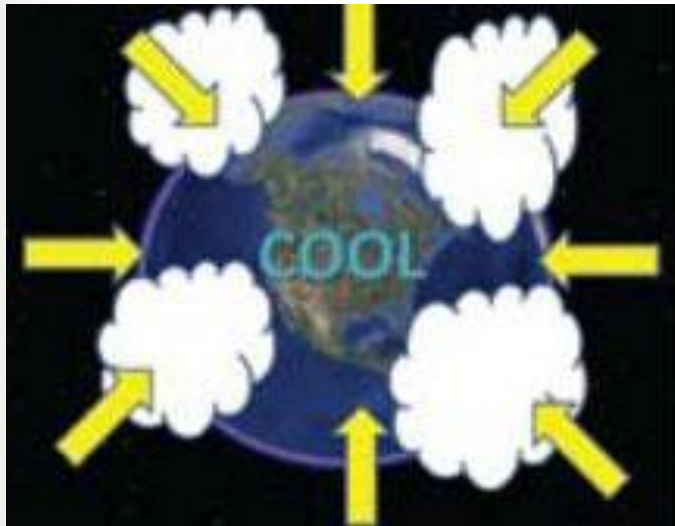
Svensmark's GCR Theory

Inactive Sun

High cosmic rays

More clouds

Cool earth

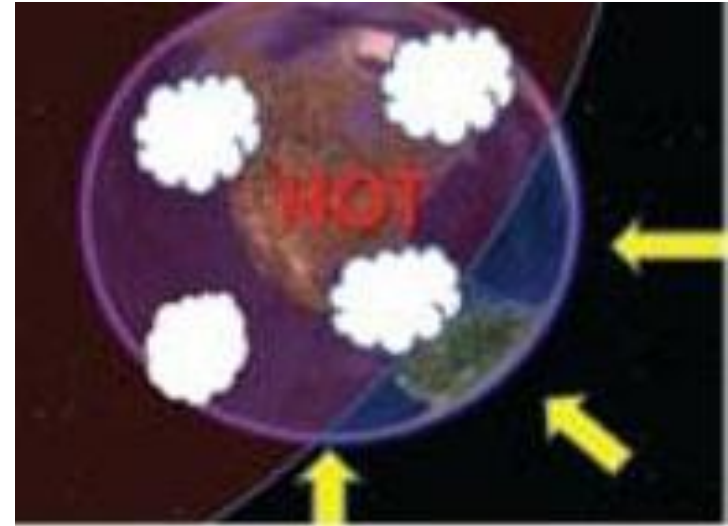


Active Sun

Low cosmic rays

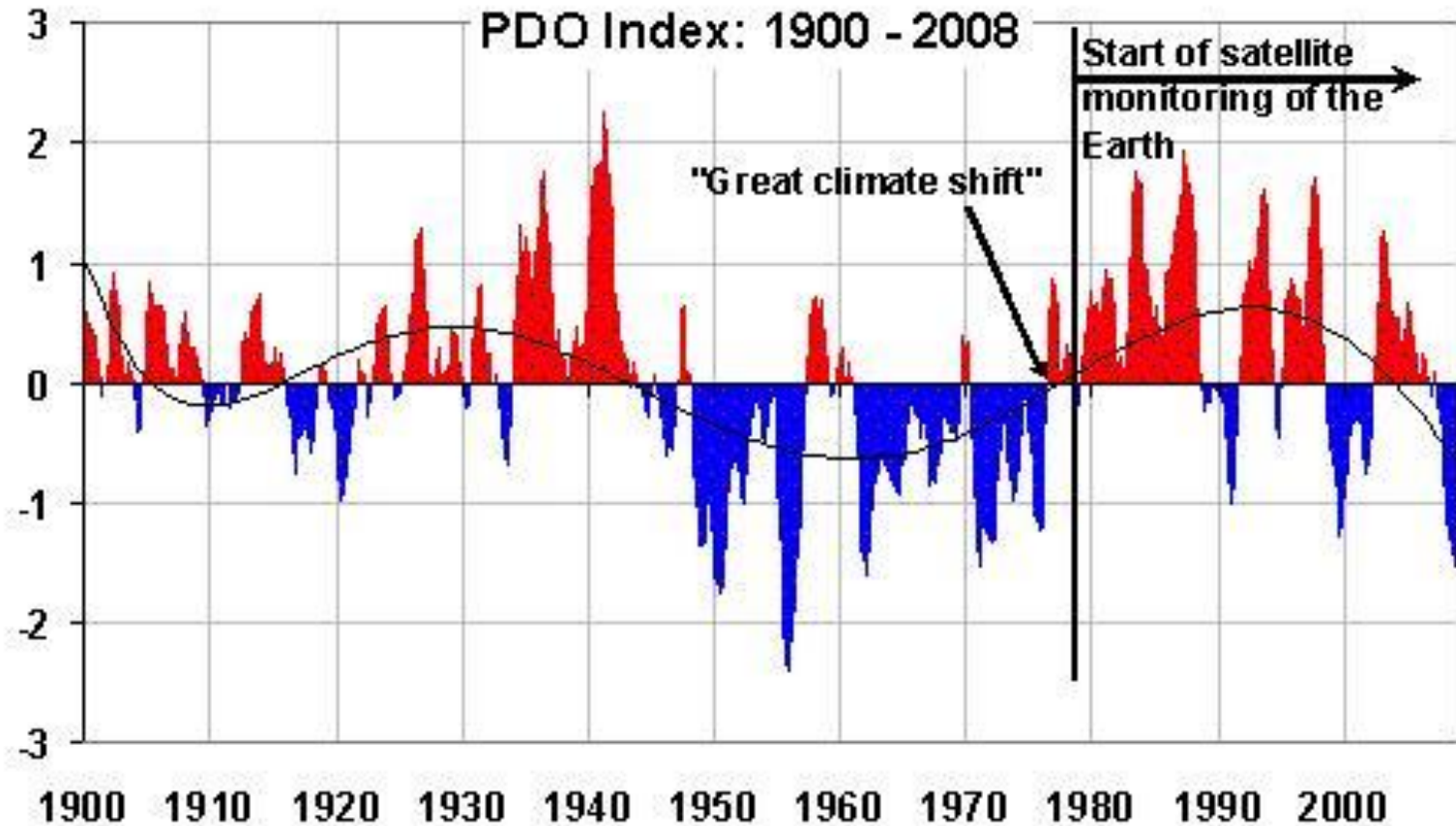
Fewer clouds

Hot earth

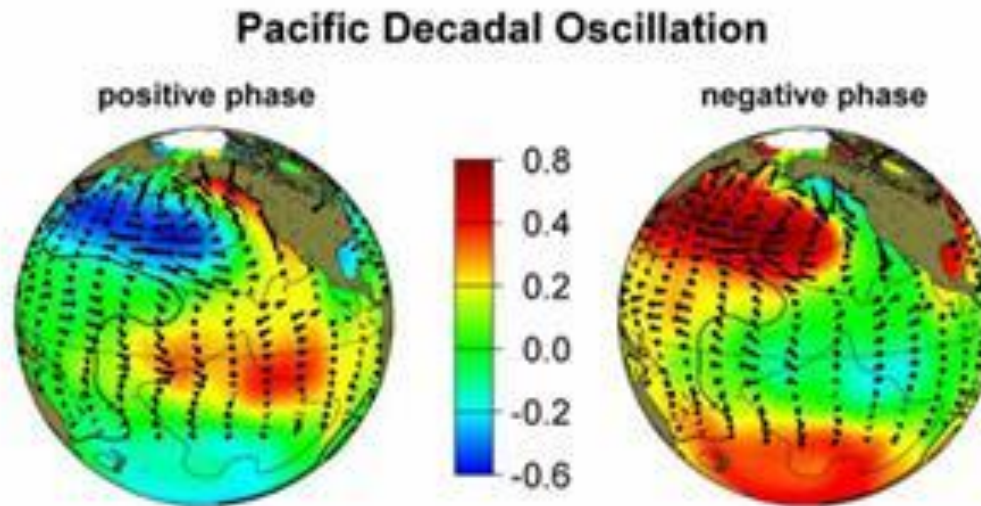


Cloud Experiment Supports GW Theory, Dr. Larry Vardiman

Pacific Decadal Oscillation (PDO)



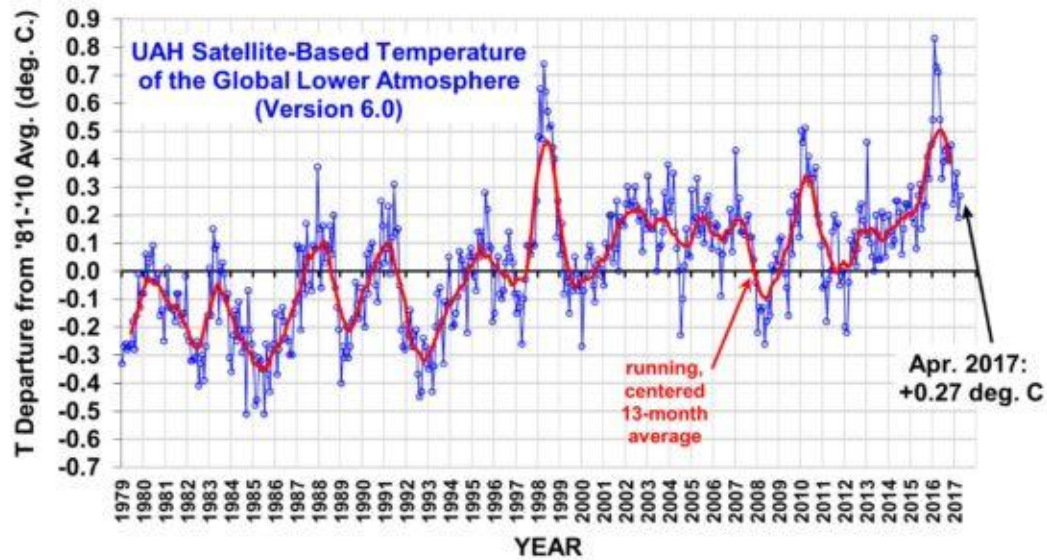
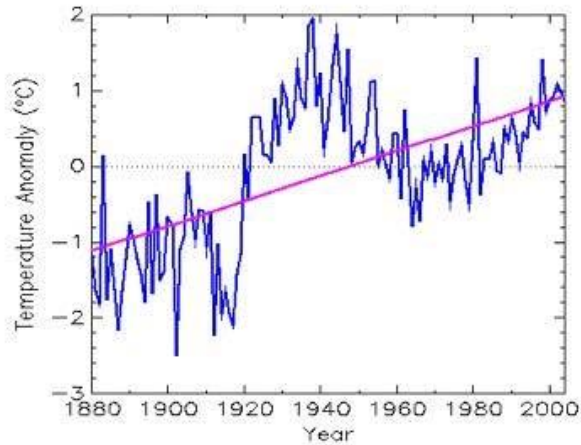
PDO – Key to the GW Debate?



- Switch between two circulation patterns every 30 years in North Pacific Ocean
- ENSO – El Nino Southern Oscillation every few years of tropical Pacific Ocean

1880-2004 Temperature Time Series

Latitude Range 70 to 90, Longitude Range -180 to 180
(from the Jones et al. dataset)



NIPCC



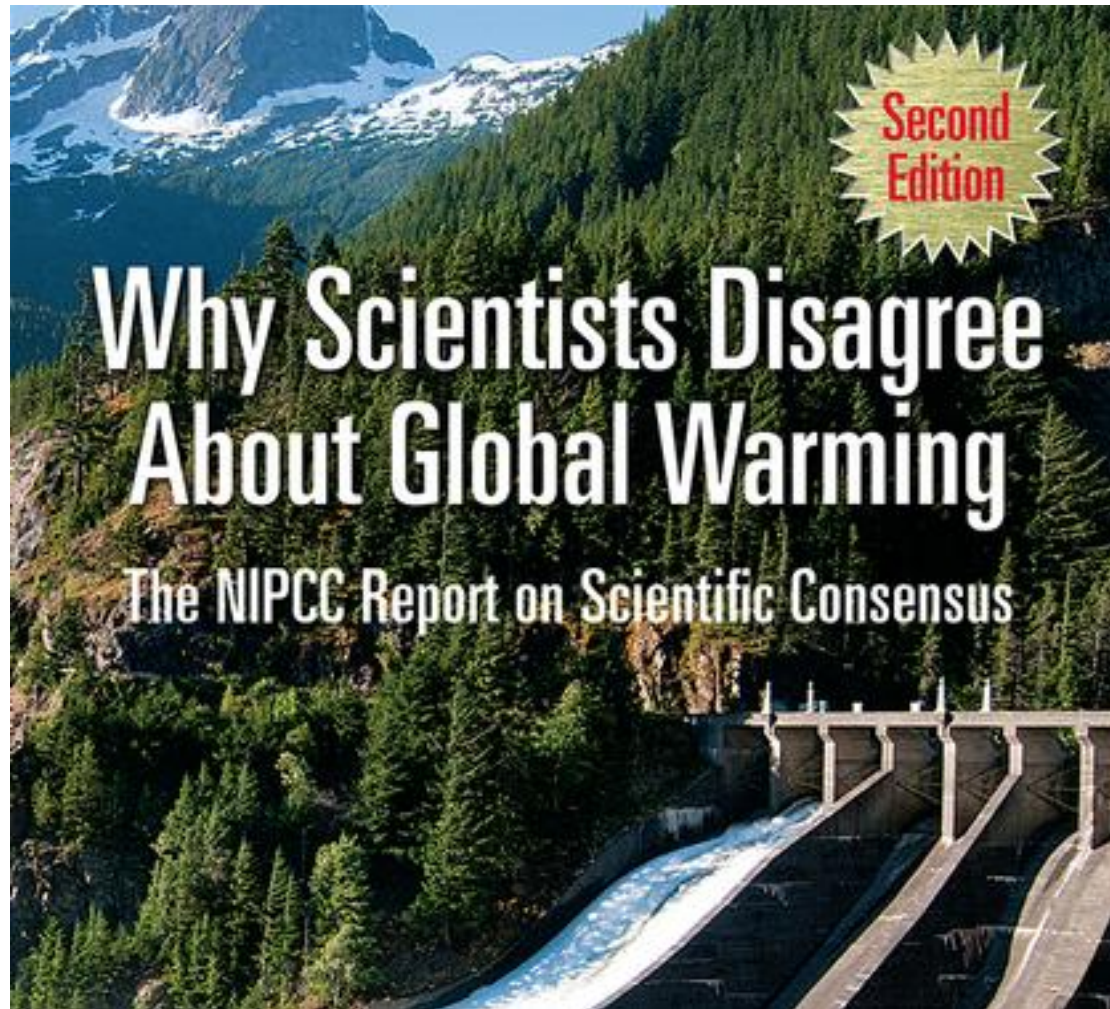
■ Nongovernmental International Panel on Climate Change

- Nongovernment scientists and scholars
- Peer reviewed technical papers
- Annual Climate Change conference

■ Published reports

- Nature, Not Human Activity, Rules the Climate
- Climate Change Reconsidered I and II
- Scientific Critique of IPCC's 'Summary for Policymakers'
- Why Scientists Disagree About GW

Second Edition of NIPCC Book





NIPCC's Findings on Physical Science

- Atmospheric carbon dioxide (CO₂) is a mild greenhouse gas that exerts a diminishing warming effect as its concentration increases.
- Doubling the concentration of atmospheric CO₂ from its pre-industrial level, in the absence of other forcings and feedbacks, would likely cause a warming of ~0.3°C to 1.1°C, almost 50 percent of which must already have occurred.
- A few tenths of a degree of additional warming, should it occur, would not represent a climate crisis.
- CO₂ is a vital nutrient used by plants in photosynthesis. Increasing CO₂ in the atmosphere “greens” the planet and helps feed the growing human population.



Findings on Physical Science – 2

- Model outputs published in successive IPCC reports since 1990 project a doubling of CO₂ could cause warming of up to 6°C by 2100. Instead, global warming ceased around the end of the twentieth century and was followed (since 1997) by 19 years of stable temperature.
- Over recent geological time, Earth's temperature has fluctuated naturally between about +4°C and -6°C with respect to twentieth century temperature. A warming of 2°C above today, should it occur, falls within the bounds of natural variability.
- Though a future warming of 2°C would cause geographically varied ecological responses, no evidence exists that those changes would be net harmful to the global environment or to human well-being.



Findings on Physical Science – 3

- At the current level of ~400 ppm we still live in a CO₂-starved world. Atmospheric levels 15 times greater existed during the Cambrian Period (about 550 million years ago) without known adverse effects.
- The overall warming since about 1860 corresponds to a recovery from the Little Ice Age modulated by natural multidecadal cycles driven by ocean-atmosphere oscillations, or by solar variations at the de Vries (~208 year) and Gleissberg (~80 year) and shorter periodicities.
- Earth has not warmed significantly for the past 18 years despite an 8 percent increase in atmospheric CO₂, which represents 34 percent of all extra CO₂ added to the atmosphere since the start of the industrial revolution.



Findings on Physical Science – 4

- No close correlation exists between temperature variation over the past 150 years and human-related CO₂ emissions. The parallelism of temperature and CO₂ increase between about 1980 and 2000 AD could be due to chance and does not necessarily indicate causation.
- The causes of historic global warming remain uncertain, but significant correlations exist between climate patterning and multidecadal variation and solar activity over the past few hundred years.
- Forward projections of solar cyclicity imply the next few decades may be marked by global cooling rather than warming, despite continuing CO₂ emissions.



NIPCC Key Findings

- No consensus
- Why scientists disagree
- Scientific method vs. political science
- Flawed projects
- False postulates
- Unreliable circumstantial evidence
- Policy implications

The 97% Claim – False!

- “Probably the most widely repeated claim in the debate over global warming is that **“97 percent of scientists agree”** that climate change is man-made and dangerous. This claim is not only false, but its presence in the debate is an insult to science.”
 - *Why Scientists Disagree About GW*, pg. 1 [Introduction].
- “In May 2014, Secretary of State **John Kerry** warned graduating students at Boston College of the “crippling consequences” of climate change. “Ninety-seven percent of the world’s scientists tell us this is urgent,” he added (Kerry, 2014). Three days earlier, President Obama tweeted that “Ninety-seven percent of scientists agree: #climate change is real, man-made and dangerous” (**Obama**, 2014). What is the basis of these claims?”
 - *Why Scientists Disagree About GW*, pg. 8.



Consensus on Consensus – Cook, 2016

Studies into scientific agreement on human-caused global warming

- Seven climate consensus studies

- Oreskes 2004, Doran 2009, Anderegg 2010, Cook 2013, Verheggen 2014, Stenhouse 2014, Carlton 2015



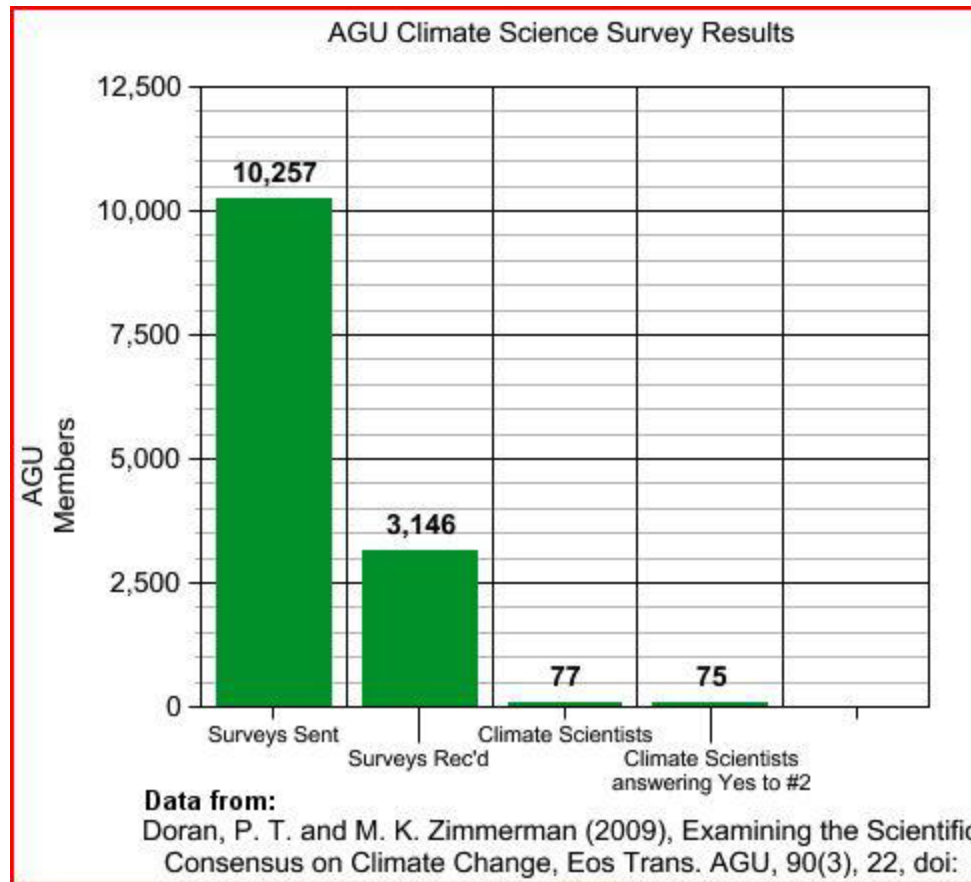
- Two key conclusions:

- 1) Depending on exactly how you measure the expert consensus, it's somewhere between 90% and 100% that agree humans are responsible for climate change, with most of our studies finding 97% consensus among publishing climate scientists.
- 2) The greater the climate expertise among those surveyed, the higher the consensus on human-caused global warming.



Why Scientists Disagree on GW, pg. 8ff

Doran GW Survey Results



e.g. Doran Survey Bias

- Doran/Zimmerman 2009 two-question survey:
 - “Q1. When compared with pre-1800s levels, do you think that mean global temperatures have generally risen, fallen, or remained relatively constant?”
 - Q2. Do you think human activity is a significant contributing factor in changing mean global temperatures?”

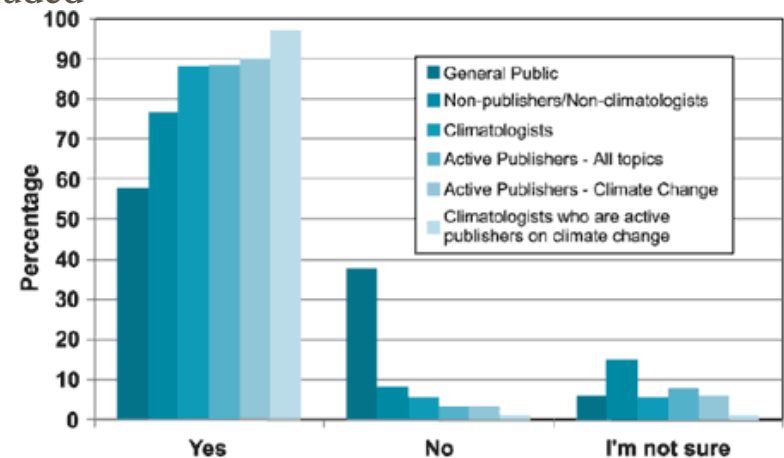
- Survey sent to 10,257 Earth scientists

Why Scientists Disagree on GW, pg. 13-14

- Limited to academic, government workers
- Solar scientists & meteorologists excluded
- Responses from 3,146
- Q1 – risen 90+
- Q2 – yes 82

- Survey results considered

- 79 who listed climate science as their area of expertise, and 50%+ of recent papers on climate science
- Asked wrong questions of wrong people

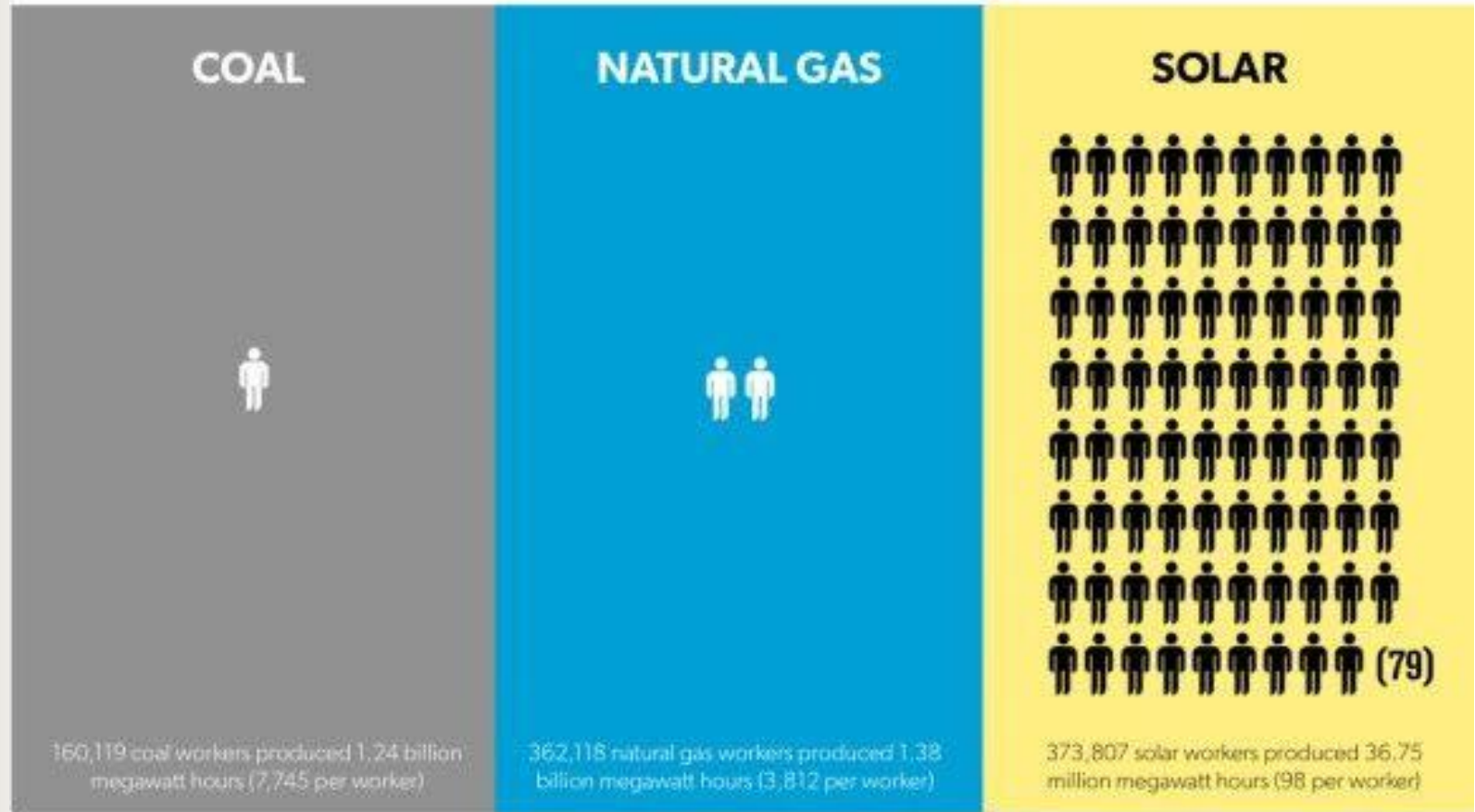


Comparing Costs of Energy

- More Solar Jobs is a curse, not a blessing - NYT article, 5/9/17
- Drawbacks to wind/solar energy: land, backup power, transmission, raw material, high electricity costs, environmental impact, no CC benefits

<u>Electricity Source</u>	<u>Workers</u>	<u>Percent Produced</u>	<u>MWH per worker</u>	<u>Workers per 7745</u>
Coal	160K	30.4	7745	1
Natural Gas	398K	33.8	3812	2
Wind	100K	5.6	836	12
Solar	374K	0.9	98	79
Other		29.3		

Workers Required to Produce the Same Amount of Electric Power (2016)



Source: US Department of Energy

Carpe Diem **AEI**



What the news media isn't telling you

- Global warming ended in 1998.
- There has been NO Global warming in 15 yrs. Global warming from 1978 to 1998 has been replaced by Global cooling.
- The Antarctic ice sheet is growing, not melting.
- Sea level is rising 7" per century, not 20 ft.
- Snowfall is not below normal. Four of the past 5 years have set snowfall records.
- CO2 cannot cause global warming.
- Severe storms are not more frequent than normal.
- The oceans are not acid.



SPECIFIC ISSUES IN SENATE BILL 5802

1. Emissions of greenhouse gases from human activities is the principal cause of climate change.
2. Sea level is rising at an increasing rate because of global warming.
3. The frequency of severe storms is increasing because of global warming.
4. Reduced winter snow packs and decreased summer streamflows.
5. Increasing acidification of the state's marine waters.
6. Produce more electricity from renewable energy while phasing out coal-powered electricity generation.



Five Key Climate Questions

- Is the world warming?
 - *Yes, but historic record likely overstated, and there has been no warming in last 10 years*
- Is that warming due to man's CO₂?
 - *Likely “some,” but probably not “most”*
- Will future man-made warming be substantial?
 - *Perhaps a degree, at most, over the next century*
- Will we see catastrophic effects from warming?
 - *Likely not – we have not seen them so far*
- Do CO₂ abatement laws like cap-and-trade make sense?
 - *Costs far more than it helps. Many more important priorities. Carbon tax better than cap-and-trade.*



What GW Advocates Must Prove

- Global warming actually exists
- Global warming is causing climate change
- Global warming is caused mainly by CO₂
- Burning fossil fuels is the primary cause of CO₂ increasing
- Global warming will absolutely cause serious harm
- Proposed solutions are effective, fair and economic

What Should the Church Do About GW?

- Commit to viewing the world from God's perspective
- Understand and rely on Scripture as a foundation for life
- Use the Bible to understand the world and evaluate all problems
- Help inform other believers
- Promote the truth and oppose false beliefs with gentleness and respect



Gen. 8:22, *While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease.*



Why There Is No Reason For Alarm

- O_2 and CO_2 in the atmosphere were created, they did not evolve
- Today's atmosphere likely contains significantly less CO_2 than before the Flood
- CO_2 is necessary for life, and was created prior to plants and animals
- CO_2 is not a pollutant
- Increasing levels of CO_2 are beneficial for plants
- Decreasing levels of CO_2 could be a serious problem
- Burning fossil fuels simply returns CO_2 to the air,
- The present levels of oxygen in the air are adequate
- Plants were created as food for humans and animals



Why There Is No Reason For Alarm

- Glaciers have been retreating for thousands of years since the Flood
- Ice age glaciers melted due to cooling seas, not warming seas
- Climates have been constantly changing since the Flood
- Plants, animals and mankind have been adapting to climate for thousands of years
- Recent global temperature histories are insufficient for developing reliable conclusions about trends or impending catastrophes
- Increasing the concentration of CO₂ in the atmosphere will continue to improve crop production around the world, benefiting mankind
- Neither melting glaciers, increasing CO₂, changing climates, nor earth's surface temperature history are proof of global warming
- God is in control of history and the earth's climates, not man





In Conclusion

- No significant GW for the last 20 years
- UN IPCC CC models have failed miserably
- Sea levels only increased 1.5 mm per decade
- Man-made causes are insufficient
 - CO2 component of atmosphere insufficient
- Sun energy alone is insufficient
- Natural causes of CC are more credible
 - Cosmo radiance with sunspots can explain CC
 - Pacific Decadal Oscillation may explain CC
- Paris Climate Agreement **NOT** a solution for non-existent problem



References

- Easterbrook/280.ppt
- Easterbrook/WAStateSenatePPT-032613.ppt
- PhoenixClimatePresentation.ppt
- History of CC in Greenland (DVD)
- The Great GW Debate by Michael Oard (DVD)
- Global Warming by Coral Ridge (DVD)
- A New Theory of CC – Dr. Larry Vardiman, Climate Scientist at ICR
- Climate Change Reconsidered II Series (NIPCC)
- Nature, Not Human Activity, Rules the Climate (SEPP)
- Why Scientists Disagree About GW (NIPCC)



Global Warming is NOT a Crisis
Let's not panic!

**Thank you
for your
attention!**

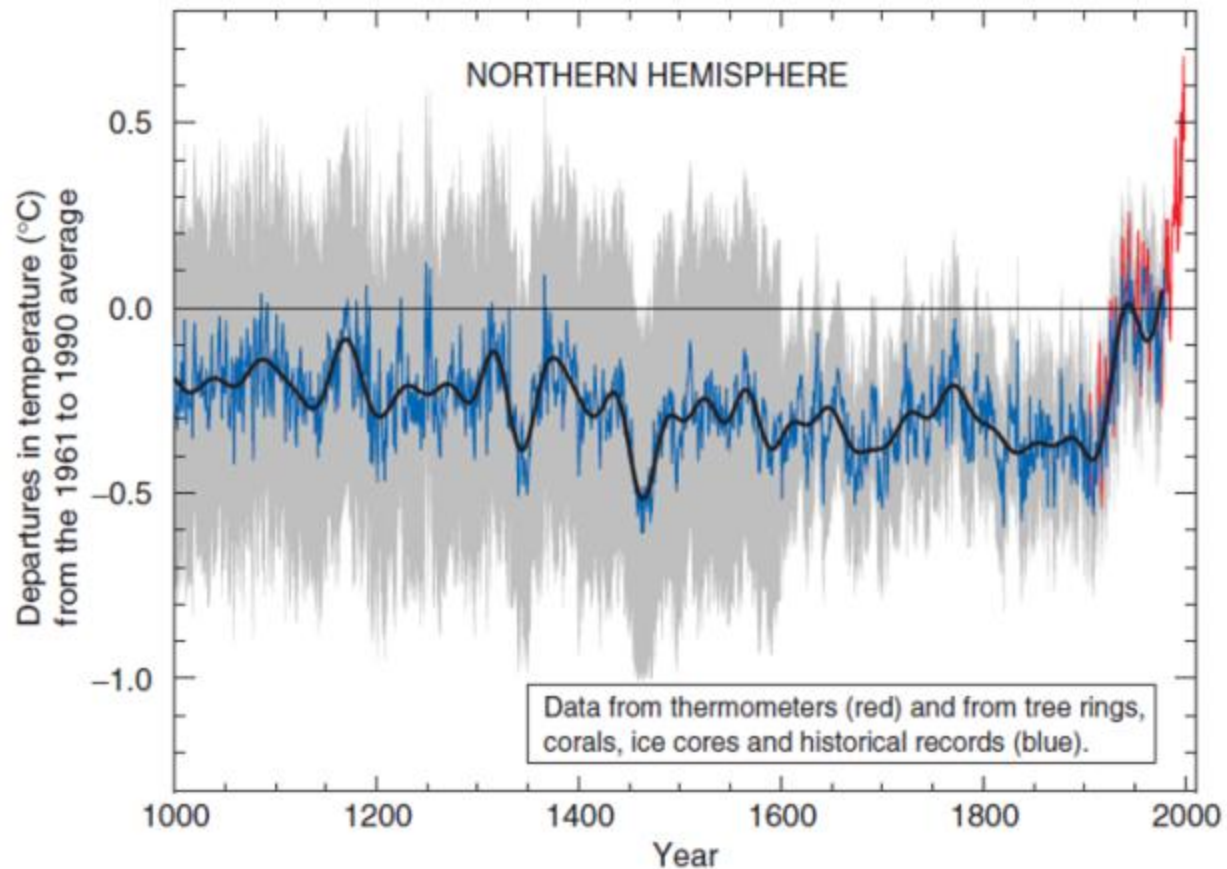
Dr. Heinz Lycklama

heinz@osta.com

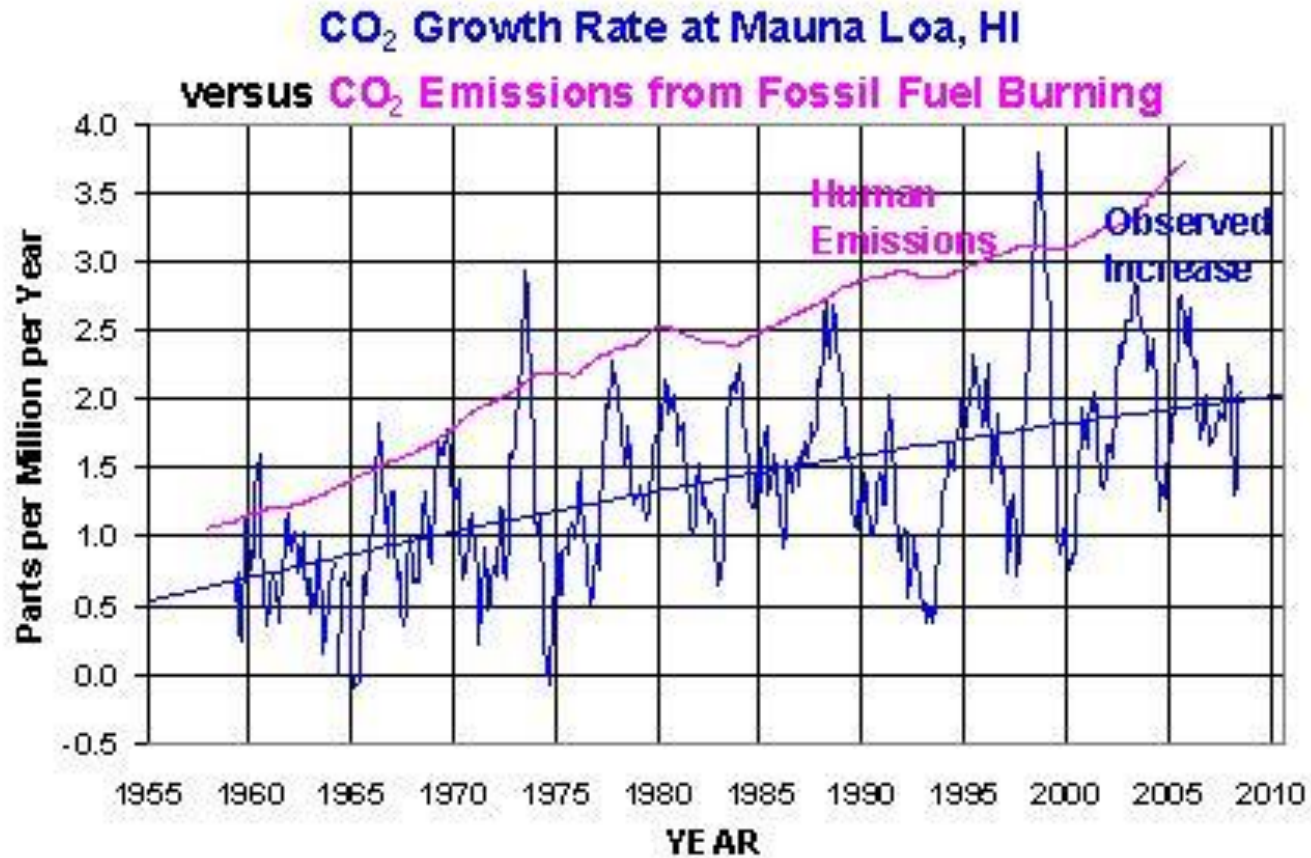
www.heinzlycklama.com

www.heinzlycklama.com/messages

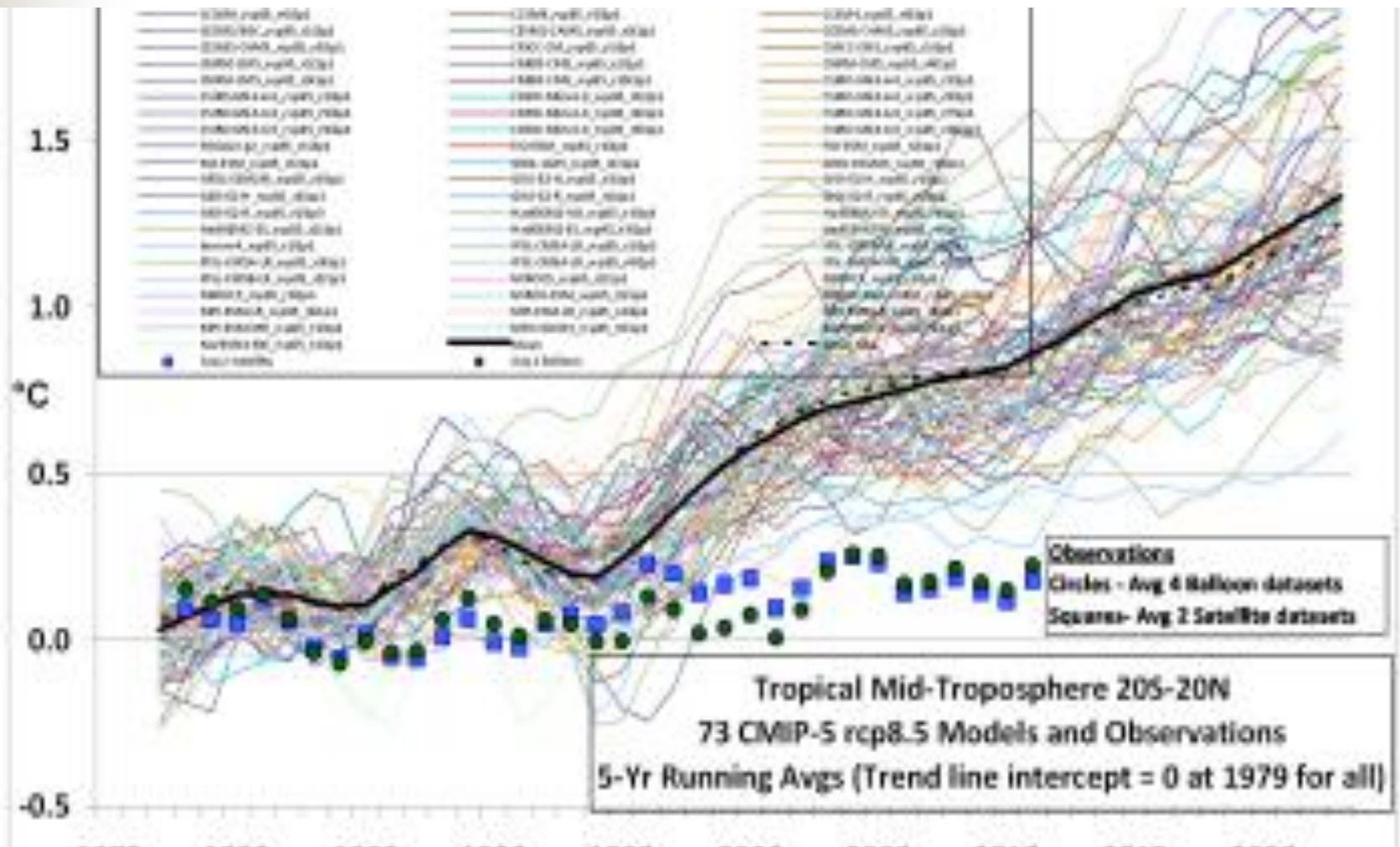
Hockey Stick Graph



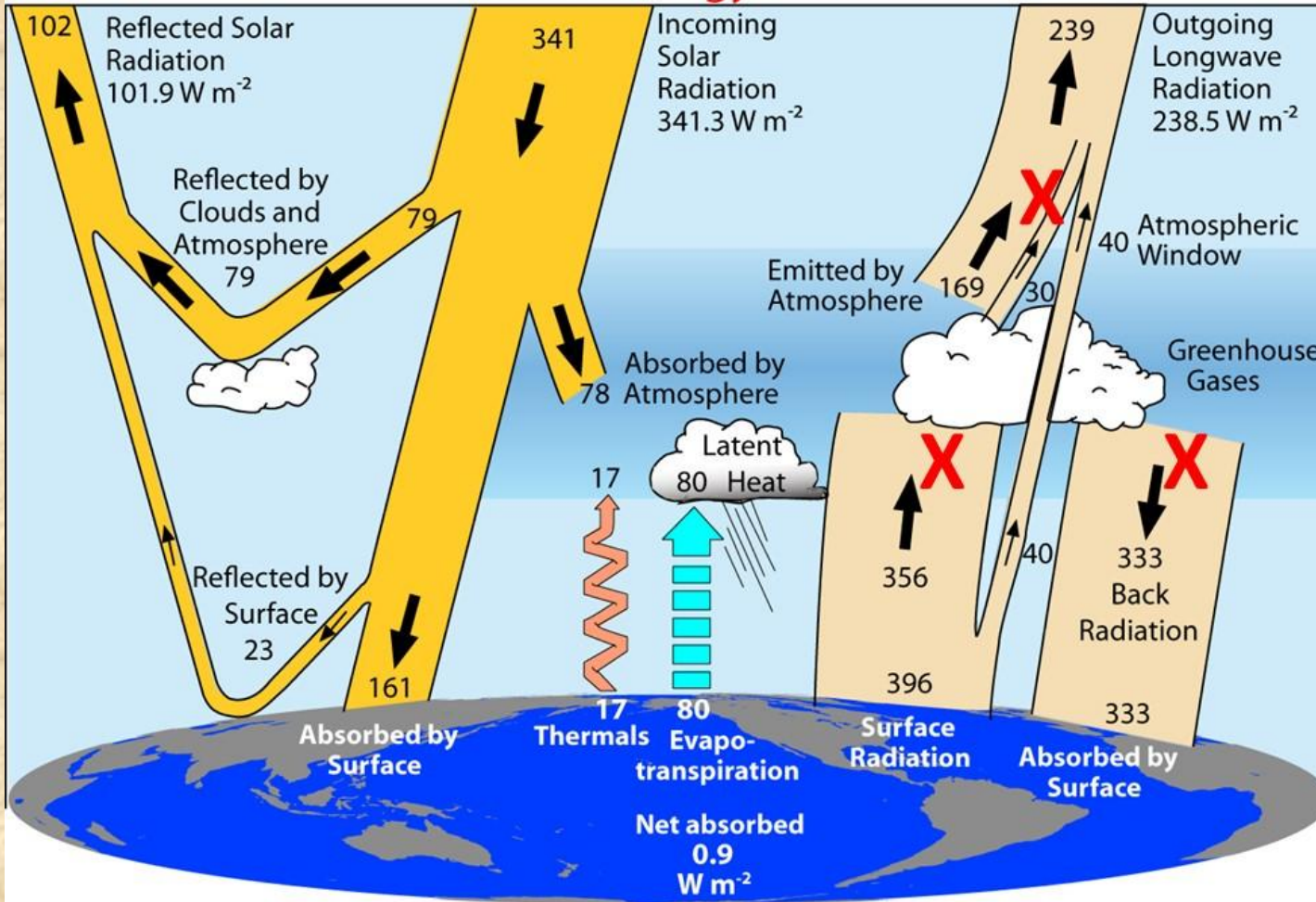
CO₂ Growth Rate at Mauna Loa



UN IPCC Climate Models

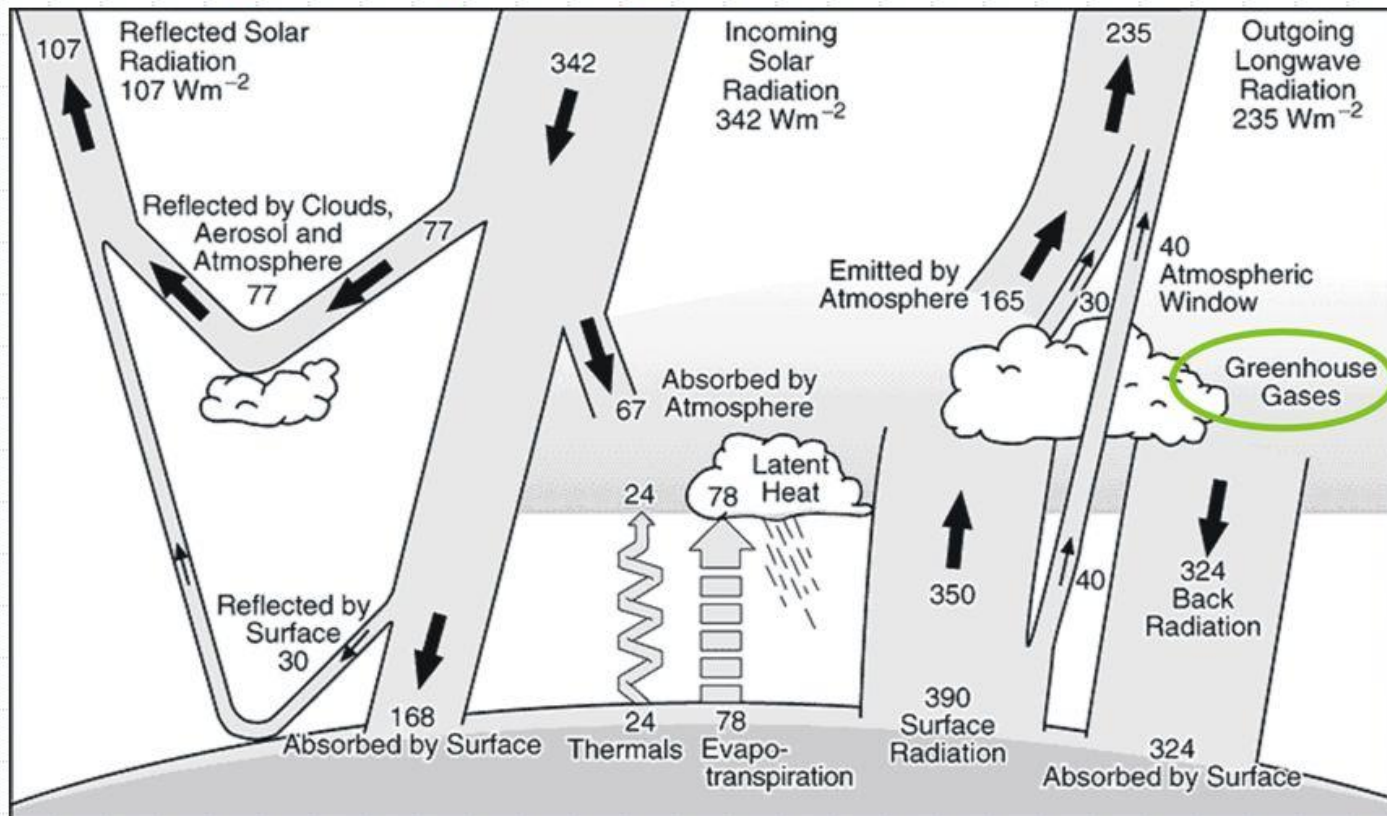


Global Energy Flows $W m^{-2}$



Infrared energy flows marked "X" would not exist without greenhouse gases

The (Atmospheric) Greenhouse Effect

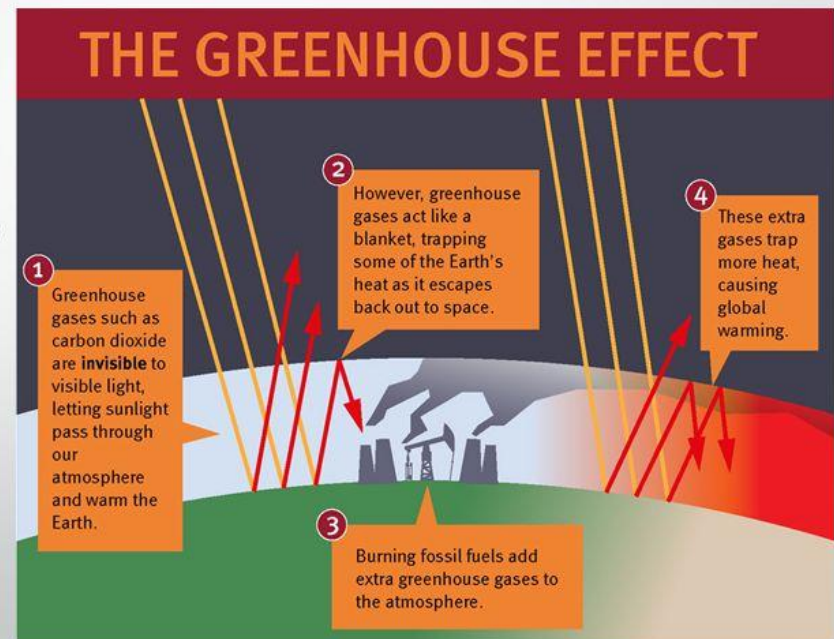


- ◆ GHGs can absorb terrestrial radiation (peaking at infrared wavelength) and re-radiate in all directions. Part of the re-radiation is sent back to the surface.

The Greenhouse Effect

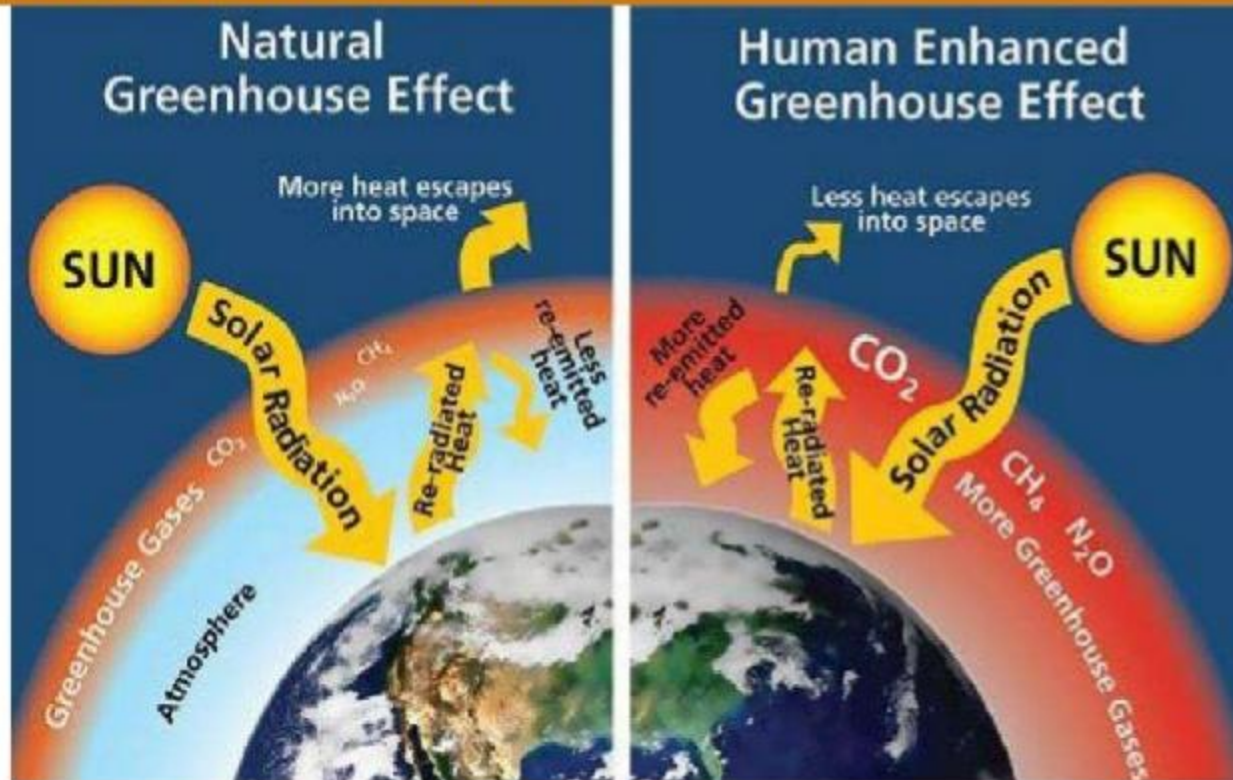
What if there are no greenhouse gases?

- Infrared radiation would go straight back into outer space.
- Why is this bad?
- The Earth would be too cold, water would freeze and there would be no life.
- Greenhouse effect keeps Earth's temp around 59 degrees.
- In time, the gases all end up back in outer space.

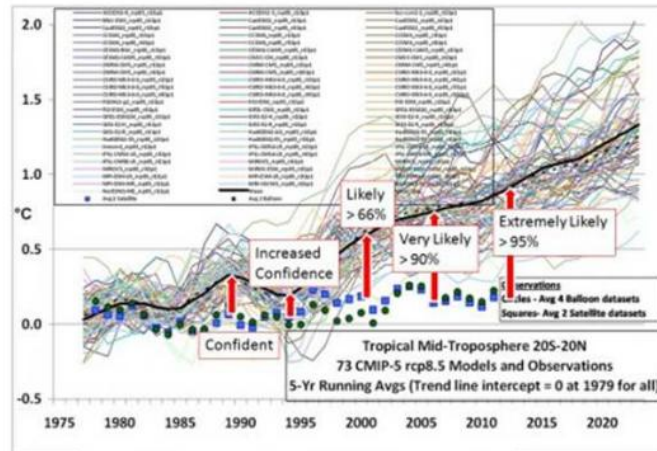


Greenhouse Effect

Climate change: Is it happening?
The Greenhouse effect



Rather than 'tell a thousand words', this picture (graph) poses a simple question...



Arrows & CON statements (from IPCC) by H. Hayden; graph by Roy Spencer, 6/6/13

Correlation between the average (solid black line) of UN IPCC's global temperature predictions progressively decreases relative to real-world observations that increasingly diverge from 'Confidence Level' statements in past IPCC Assessment Reports (red arrows - 1989, 1995, 2000, 2007 & 2013).

'Certainty' increases whilst correlation 'decreases'!

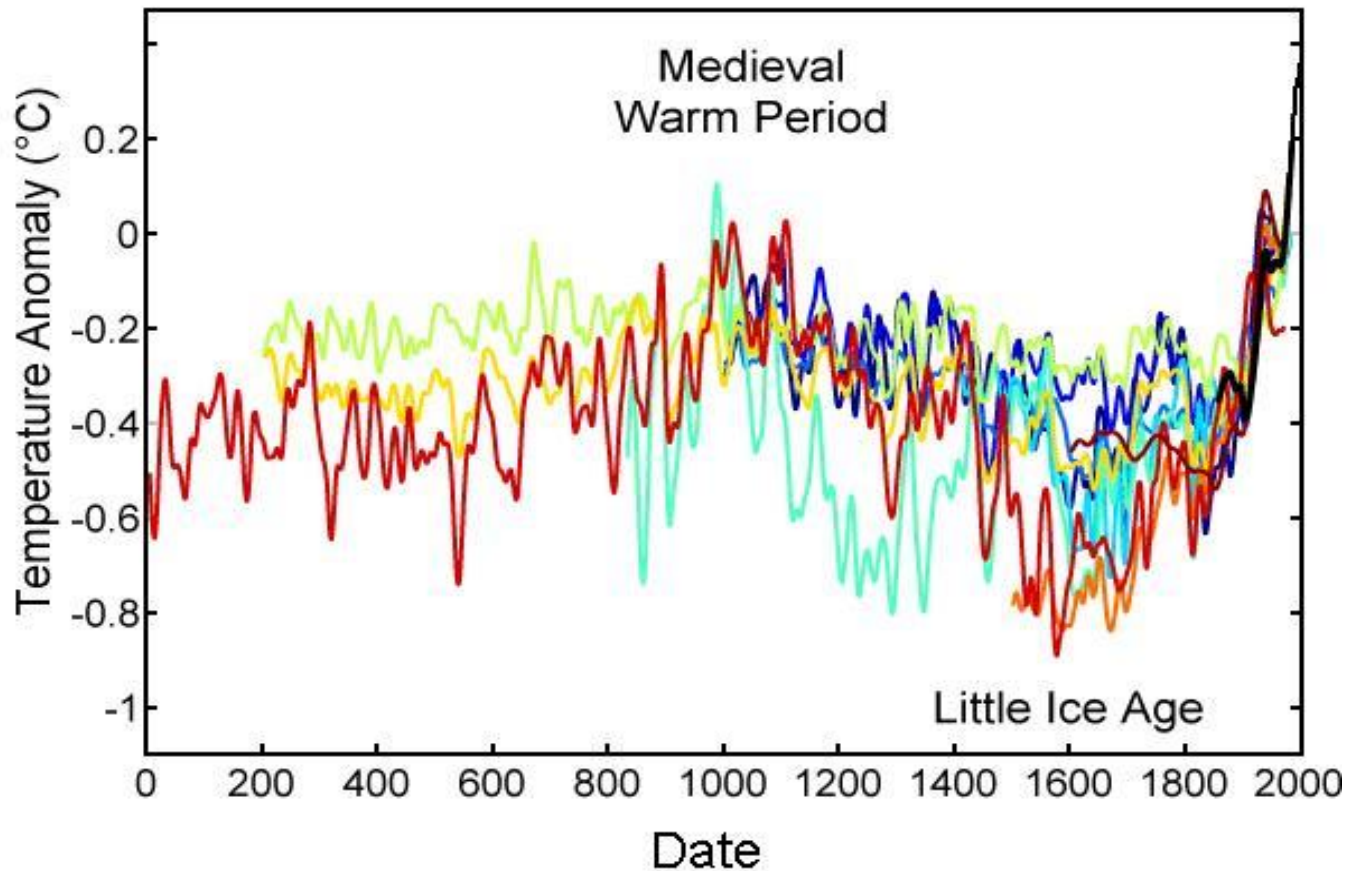
Really?

How does that work?

For more information about the failure of Climate Models, follow this Link:
<http://bit.ly/failureofclimatemodels>

A Picture tells a thousand words – Roy Spencer Graph.Doc

2000 Years of Global Temperatures



Sulfuric Acid Concentration

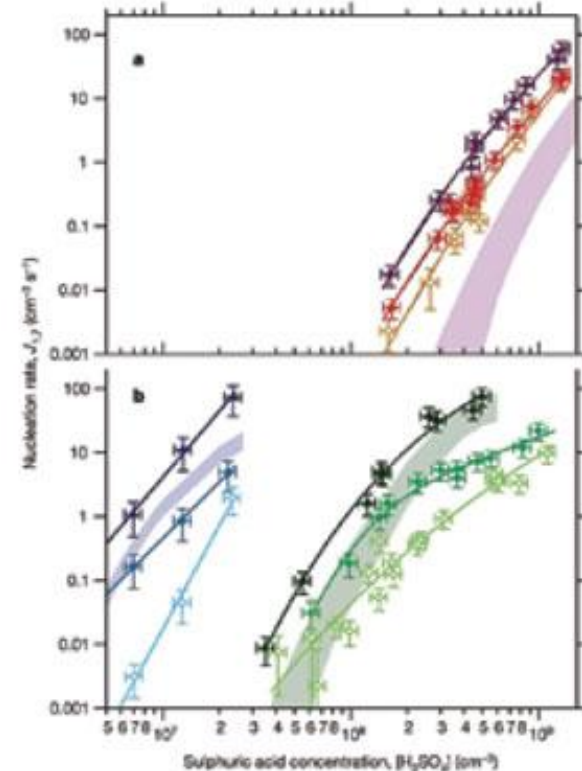


Figure 4. Nucleation rate for 1.7 nm (6.7×10^{-8} inch) diameter cloud droplets as a function of sulfuric acid concentration, 38 percent relative humidity, and a pressure of 1 atmosphere. The chamber was maintained at a temperature of 292K (33.9°F) for the red curves, 278K (8.7°F) for the green curves, and 248K (-45.3°F) for the blue curves. The NH_3 mixing ratio corresponded to the contaminant level (<35 ppt at 278 and 292K and <50 ppt at 248K). Triangles are for charged nucleation rates ($J_{v,c}$), filled circles for galactic cosmic radiation rates (J_{GCR}), and open circles for neutral rates ($J_{v,n}$). The error bars indicate the estimated total statistical and systematic 1 σ measurement uncertainties. The colored bands show the predictions from the PARNUC model for binary H_2SO_4 – H_2O charged nucleation rates $J_{v,c}$. (From Kirkby et al.⁷ Copyright 2011 Nature Publishing Group. Usage does not imply endorsement.)

The Paris climate agreement: key points

The historic pact, approved by 195 countries, will take effect from 2020



Temperatures 2100



- Keep warming "well below 2 degrees Celsius". Continue all efforts to limit the rise in temperatures to 1.5 degrees Celsius"

Finance 2020-2025



- Rich countries must provide 100 billion dollars from 2020, as a "floor"
- Amount to be updated by 2025

Differentiation



- Developed countries must continue to "take the lead" in the reduction of greenhouse gases
- Developing nations are encouraged to "enhance their efforts" and move over time to cuts

Emissions objectives 2050



- Aim for greenhouse gases emissions to peak "as soon as possible"
- From 2050: rapid reductions to achieve a balance between emissions from human activity and the amount that can be captured by "sinks"

Burden-sharing



- Developed countries must provide financial resources to help developing countries
- Other countries are invited to provide support on a voluntary basis

Review mechanism

2023



- A review every five years
First world review: 2023
- Each review will inform countries in "updating and enhancing" their pledges

Climate damage



- Vulnerable countries have won recognition of the need for "averting, minimising and addressing" losses suffered due to climate change

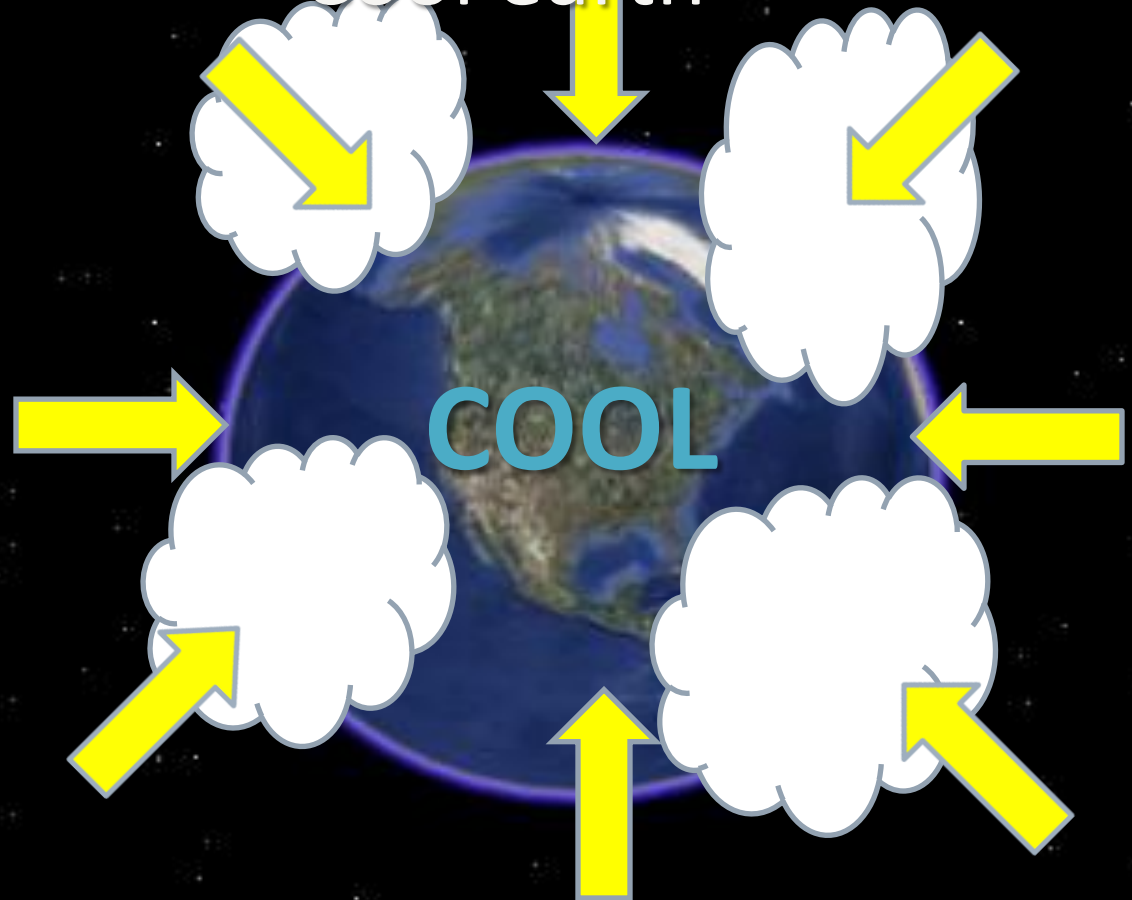
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INACTIVE SUN

High cosmic rays

More clouds

Cool earth

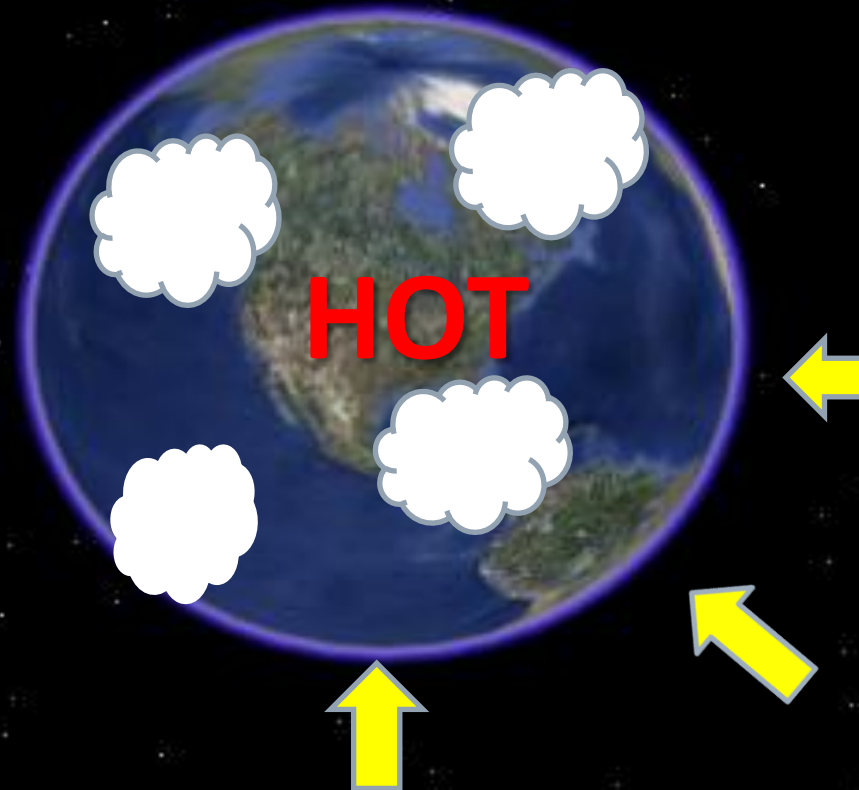


ACTIVE SUN

Low cosmic rays

Fewer clouds

Hot earth



Svensmark's GCR Theory

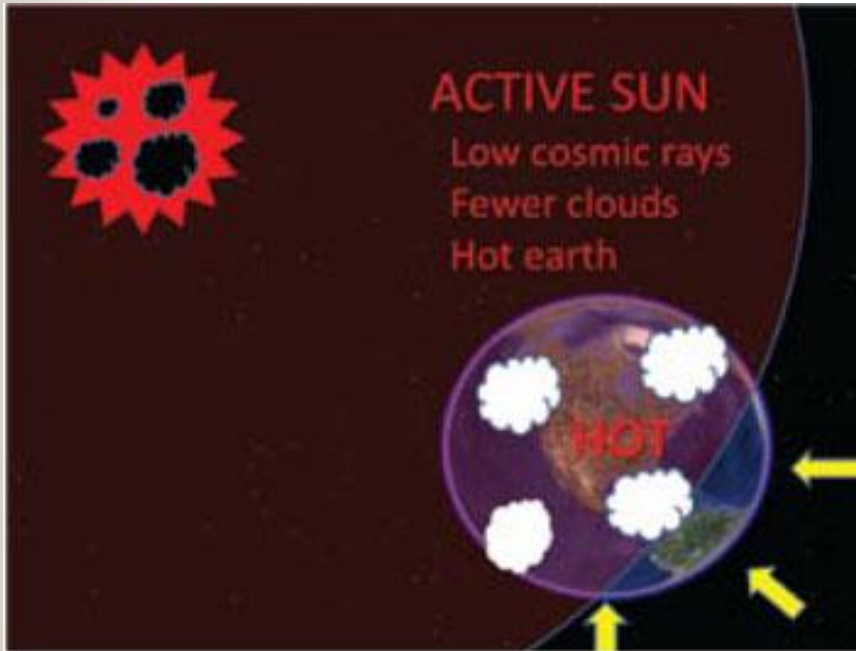


Figure 1. Cartoon showing effects of an active sun on the temperature of the earth.

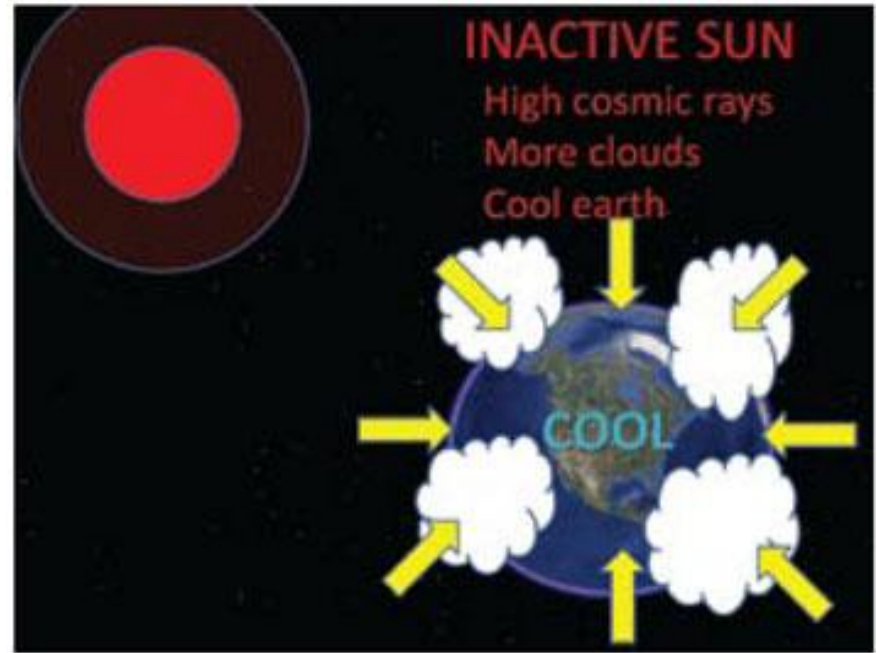


Figure 2. Cartoon showing effects of an inactive sun on the temperature of the earth.

Cloud Experiment Supports GW Theory, Dr. Larry Vardiman



Conclusions

- Global warming has been occurring for over 150 years, even before industrialization.
- It's probably due mostly to natural causes.
- Humans may contribute a small part, but the main cause of global warming is still not understood.
- One theory shows great promise: Increased solar activity modulates galactic cosmic radiation, decreases low-level cloud cover, and warms the atmosphere.
- Global warming may be beneficial.



Conclusions

- Global warming has been occurring for over 100 years.
- The warming may only be short-term.
- The warming is probably due to natural causes.
- Man probably contributes a small part.
- The cause still needs to be identified.
- One theory shows great promise: Solar activity modulates galactic cosmic radiation, decreases low-level cloud cover, and warms the atmosphere.
- The insertion of even large amounts of CO₂ causes minimal warming



No Consensus

- The most important fact about climate science, often overlooked, is that scientists disagree about the environmental impacts of the combustion of fossil fuels on the global climate.
- The articles and surveys most commonly cited as showing support for a “scientific consensus” in favor of the catastrophic man-made global warming hypothesis are without exception methodologically flawed and often deliberately misleading.
- There is no survey or study showing “consensus” on the most important scientific issues in the climate change debate.
- Extensive survey data show deep disagreement among scientists on scientific issues that must be resolved before the man-made global warming hypothesis can be validated. Many prominent experts and probably most working scientists disagree with the claims made by the United Nations’ Intergovernmental Panel on Climate Change (IPCC).

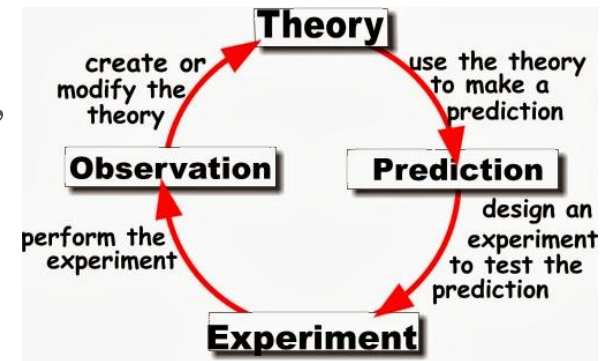


Why Scientists Disagree

- Climate is an interdisciplinary subject requiring insights from many fields of study. Very few scholars have mastery of more than one or two of these disciplines.
- Fundamental uncertainties arise from insufficient observational evidence, disagreements over how to interpret data, and how to set the parameters of models.
- IPCC, created to find and disseminate research finding a human impact on global climate, is not a credible source. It is agenda-driven, a political rather than scientific body, and some allege it is corrupt.
- Climate scientists, like all humans, can be biased. Origins of bias include careerism, grant-seeking, political views, and confirmation bias.

Scientific Method vs. Political Science

- The hypothesis implicit in all IPCC writings, though rarely explicitly stated, is that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions.
- The null hypothesis is that currently observed changes in global climate indices and the physical environment, as well as current changes in animal and plant characteristics, are the result of natural variability.
- In contradiction of the scientific method, IPCC assumes its implicit hypothesis is correct and that its only duty is to collect evidence and make plausible arguments in the hypothesis's favor.





Flawed Projections

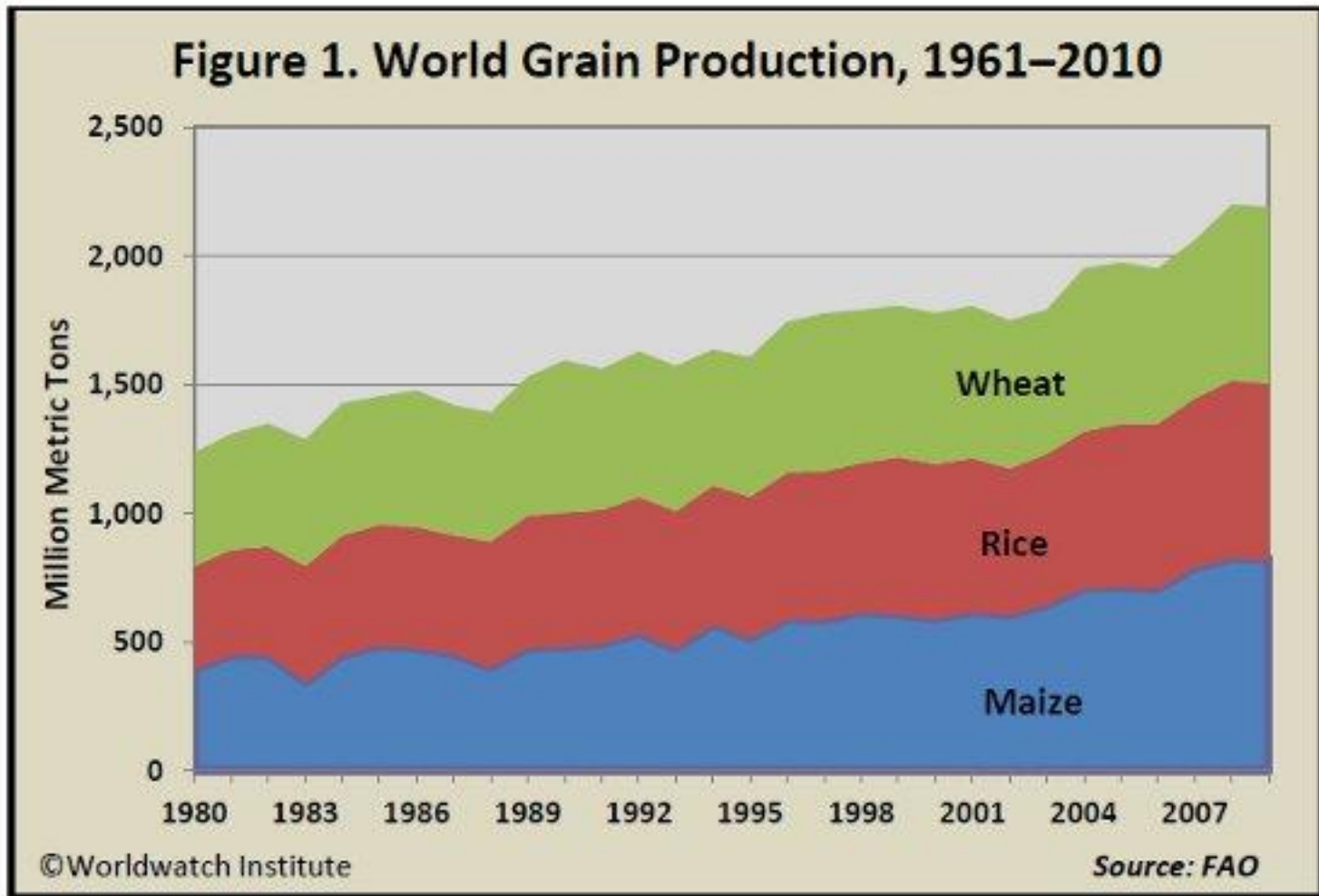
- IPCC and virtually all the governments of the world depend on global climate models (GCMs) to forecast the effects of human-related greenhouse gas emissions on the climate.
- GCMs systematically over-estimate the sensitivity of climate to carbon dioxide (CO₂), many known forcings and feedbacks are poorly modeled, and modelers exclude forcings and feedbacks that run counter to their mission to find a human influence on climate.
- NIPCC estimates a doubling of CO₂ from pre-industrial levels (from 280 to 560 ppm) would likely produce a temperature forcing of 3.7 Wm⁻² in the lower atmosphere, for about ~1°C of *prima facie* warming.
- Four specific forecasts made by GCMs have been falsified by real-world data from a wide variety of sources. In particular, there has been no global warming for some 18 years.



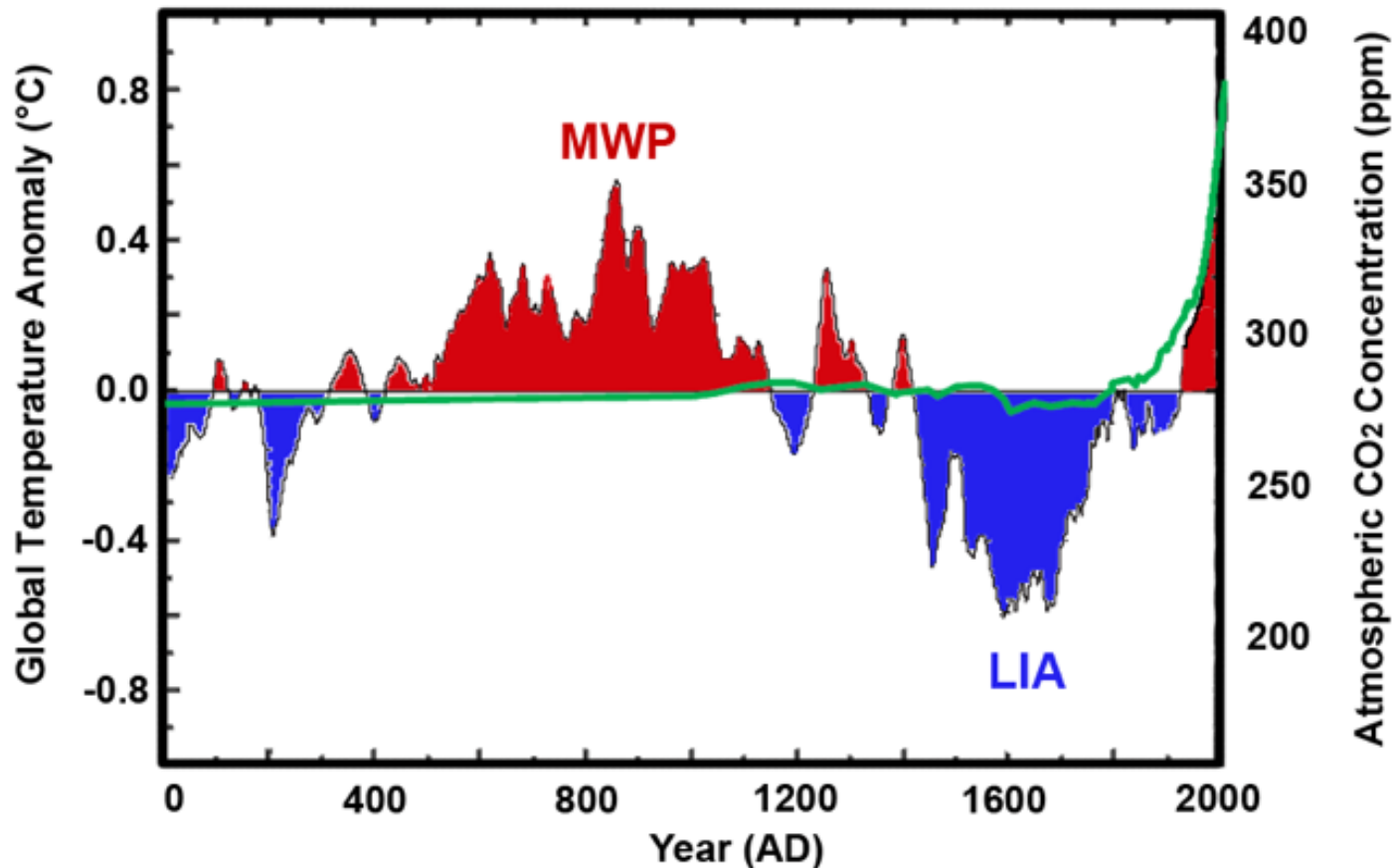
False Postulates

- Neither the rate nor the magnitude of the reported late twentieth century surface warming (1979–2000) lay outside normal natural variability.
- The late twentieth century warm peak was of no greater magnitude than previous peaks caused entirely by natural forcings and feedbacks.
- Historically, increases in atmospheric CO₂ followed increases in temperature, they did not precede them. Therefore, CO₂ levels could not have forced temperatures to rise.
- Solar forcings are not too small to explain twentieth century warming. In fact, their effect could be equal to or greater than the effect of CO₂ in the atmosphere.
- A warming of 2°C or more during the twenty-first century would probably not be harmful, on balance, because many areas of the world would benefit from or adjust to climate change.

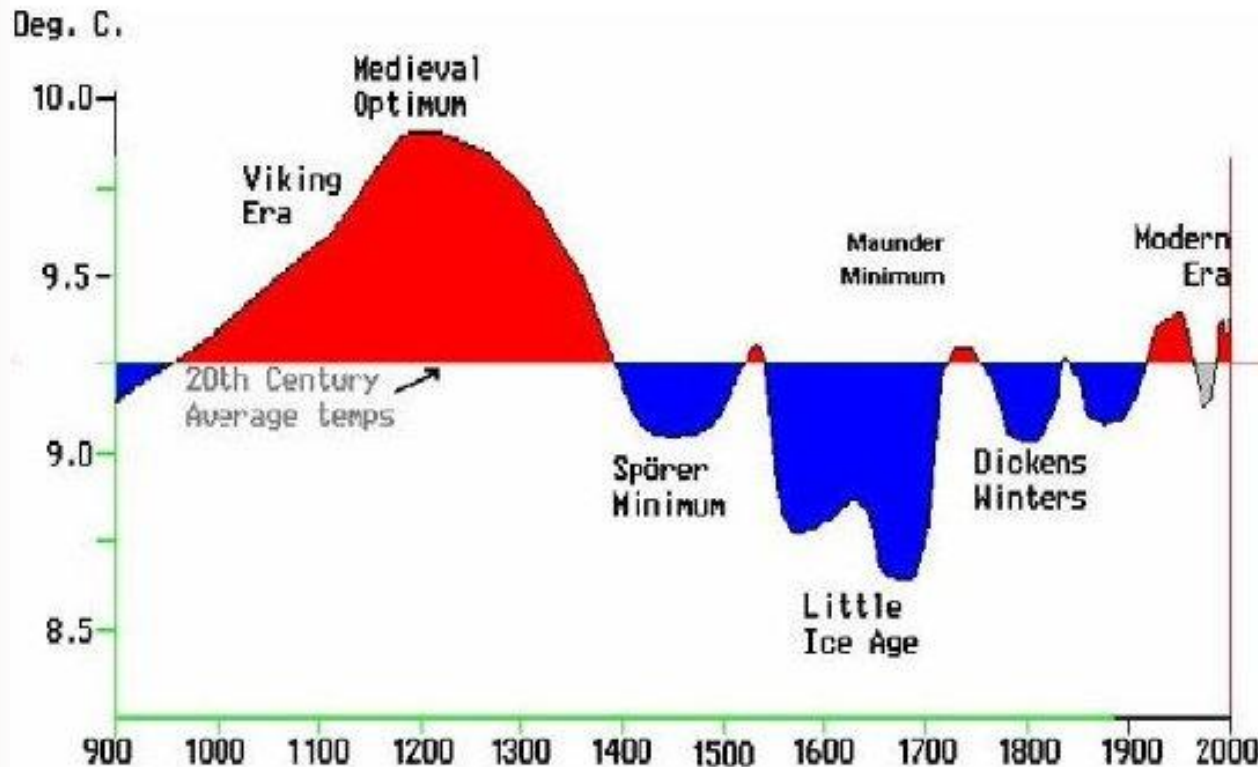
Growth and Increased CO2



Mean Relative Temperature History



Climate Changes in Europe

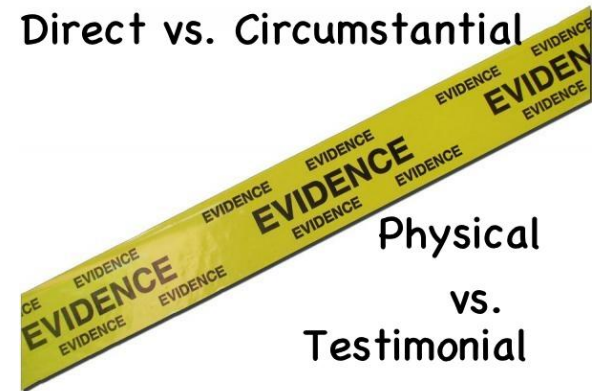


THE LAST THOUSAND YEARS IN EUROPE. Climatic changes.

Unreliable Circumstantial Evidence

- Melting of Arctic sea ice and polar icecaps is not occurring at “unnatural” rates and does not constitute evidence of a human impact on the climate.
- Best available data show sea-level rise is not accelerating. Local and regional sea levels continue to exhibit typical natural variability – in some places rising and in others falling.
- The link between warming and drought is weak, and by some measures drought decreased over the twentieth century. Changes in the hydrosphere of this type are regionally highly variable and show a closer correlation with multidecadal climate rhythmicity than they do with global temperature.

Direct vs. Circumstantial



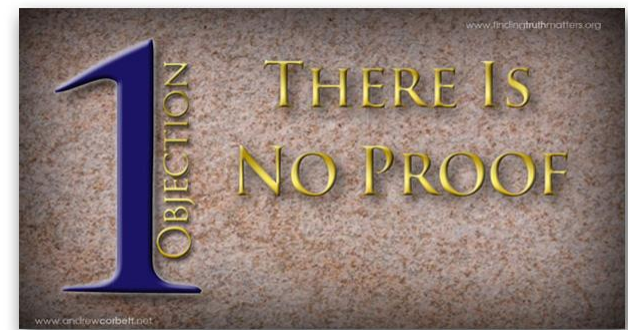
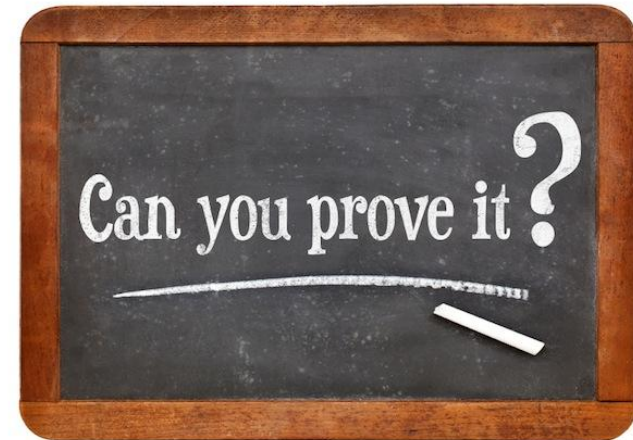
Physical

vs.

Testimonial

Unreliable Circumstantial Evidence (2)

- No convincing relationship has been established between warming over the past 100 years and increases in extreme weather events. Meteorological science suggests just the opposite: A warmer world will see milder weather patterns.
- No evidence exists that current changes in Arctic permafrost are other than natural or are likely to cause a climate catastrophe by releasing methane into the atmosphere.





Policy Implications

- Rather than rely exclusively on IPCC for scientific advice, policymakers should seek out advice from independent, nongovernment organizations and scientists who are free of financial and political conflicts of interest.
- Individual nations should take charge of setting their own climate policies based upon the hazards that apply to their particular geography, geology, weather, and culture.
- Rather than invest scarce world resources in a quixotic campaign based on politicized and unreliable science, world leaders would do well to turn their attention to the real problems their people and their planet face.