

The Science behind Global Warming

What Are Global Temperatures Doing

And

Why Are They Doing It?

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Editor, *The Correlator*

AAPG Division of Professional Affairs



Global Warming

Humans caused CO₂ levels to increase



**Increased CO₂ levels
caused temperatures to increase**

Global Warming

**The Earth
Has A Fever**

**If we do not change
Civilization will
end in 10 years**



Global Warming

A sunset over the ocean with a bright sun low on the horizon, casting a warm glow over the water. The sky transitions from a deep orange near the sun to a dark purple at the top. The ocean is dark with some whitecaps visible.

Real Crisis?

Alarmist Hype?

Question 1

**What Are
Global Temperatures Doing?**



The IPCC states

Warming of the Climate System is Unequivocal

NASA States

**The five warmest years over the
last century have been**

2005

1998

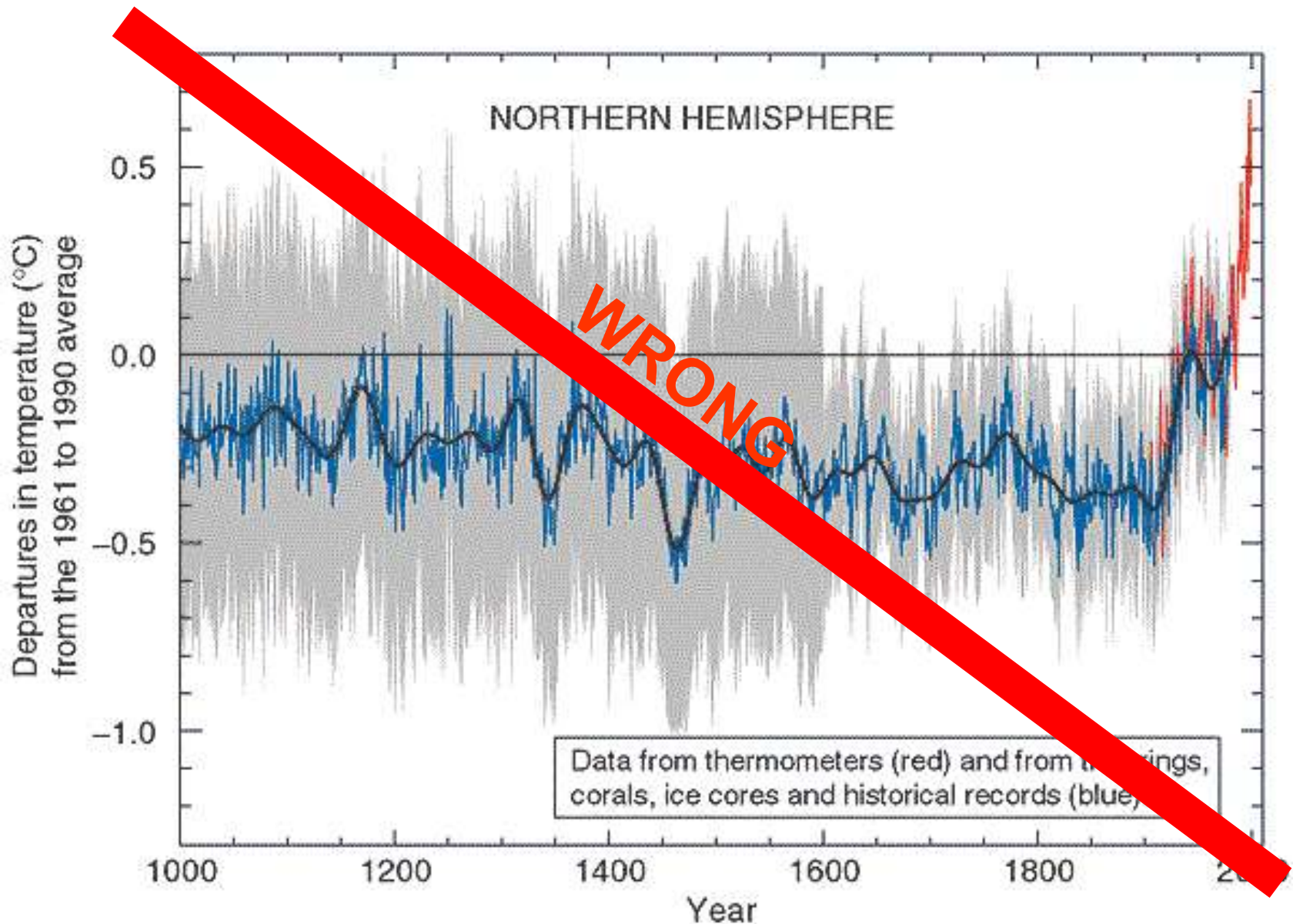
2002

2003

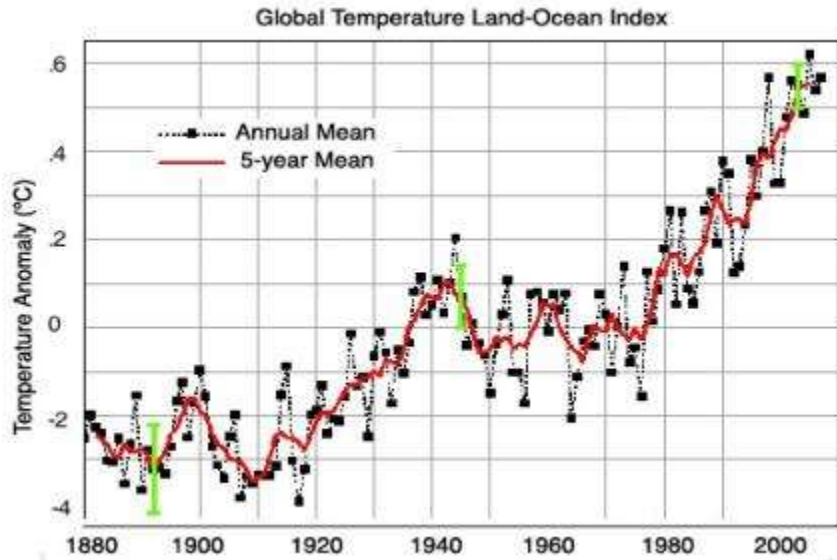
2006.



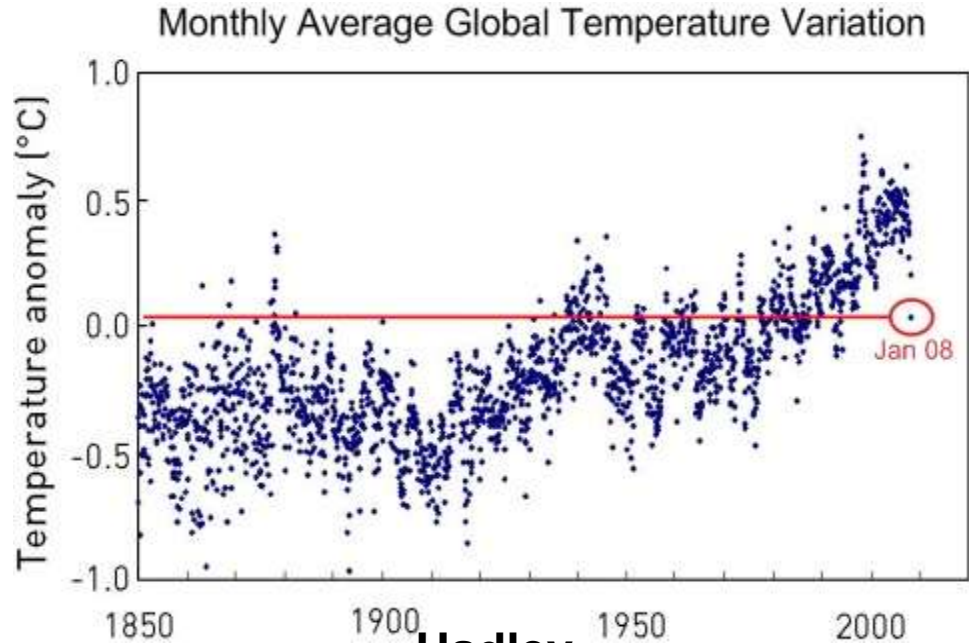
Mann "Hockey Stick" Curve



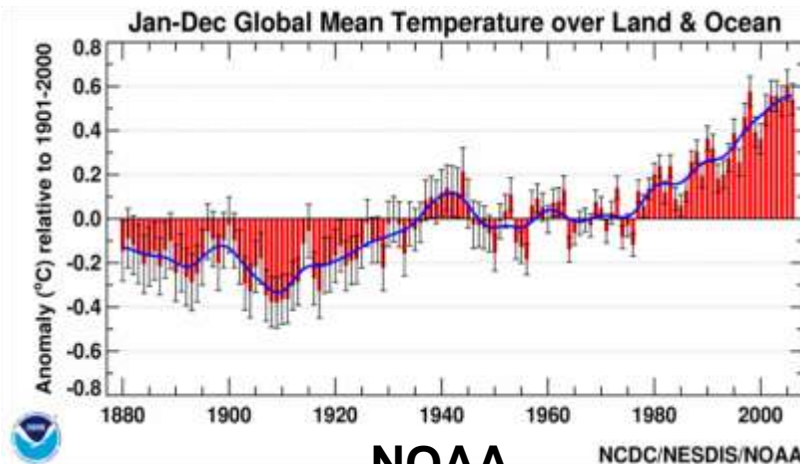
Average Temperature Profiles Differ Slightly by Agency



NASA



Hadley

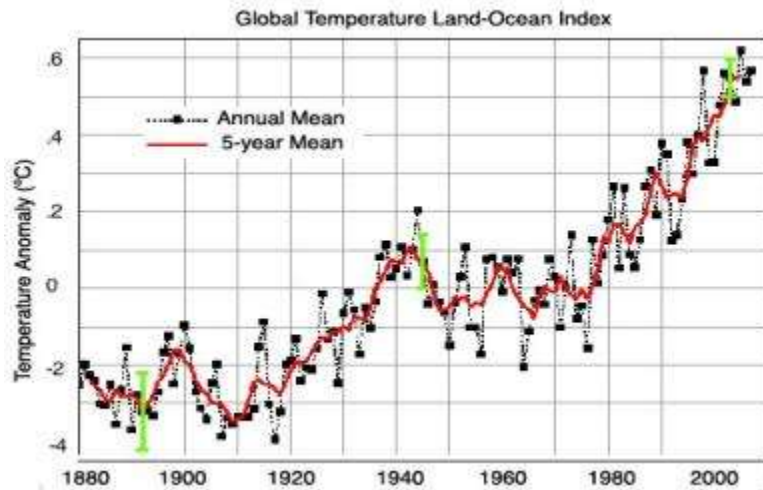


NOAA

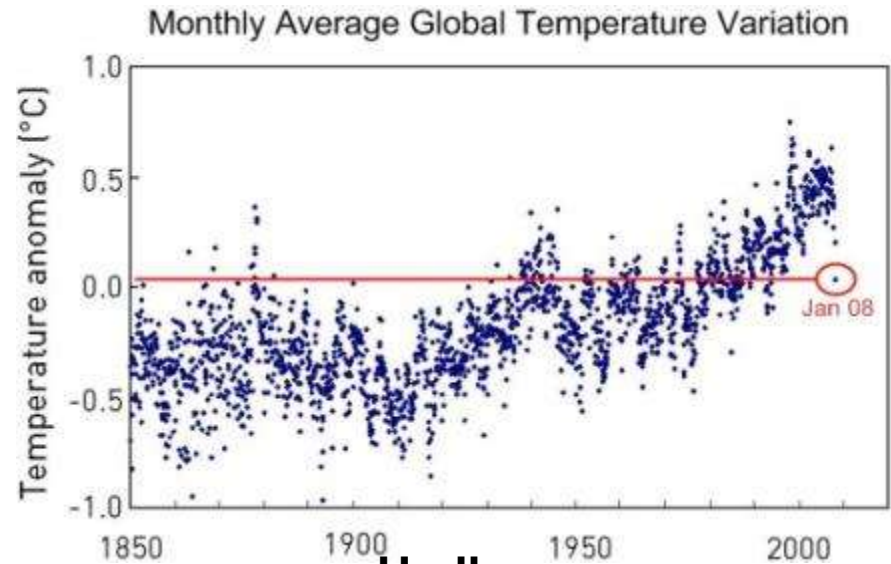
Average Temperature Profiles

Include Processed Data

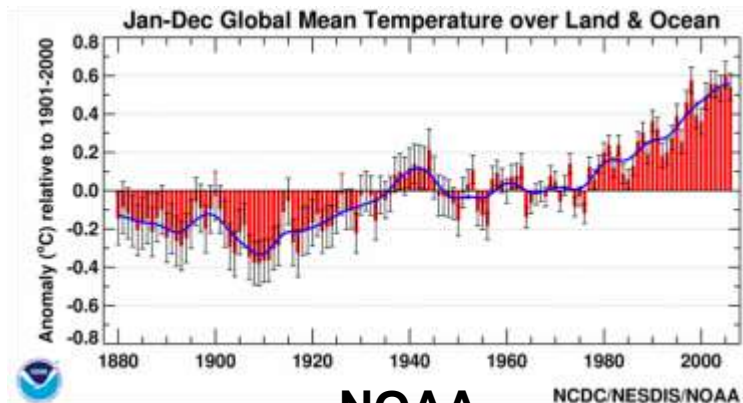
And Add Extrapolated Data



NASA

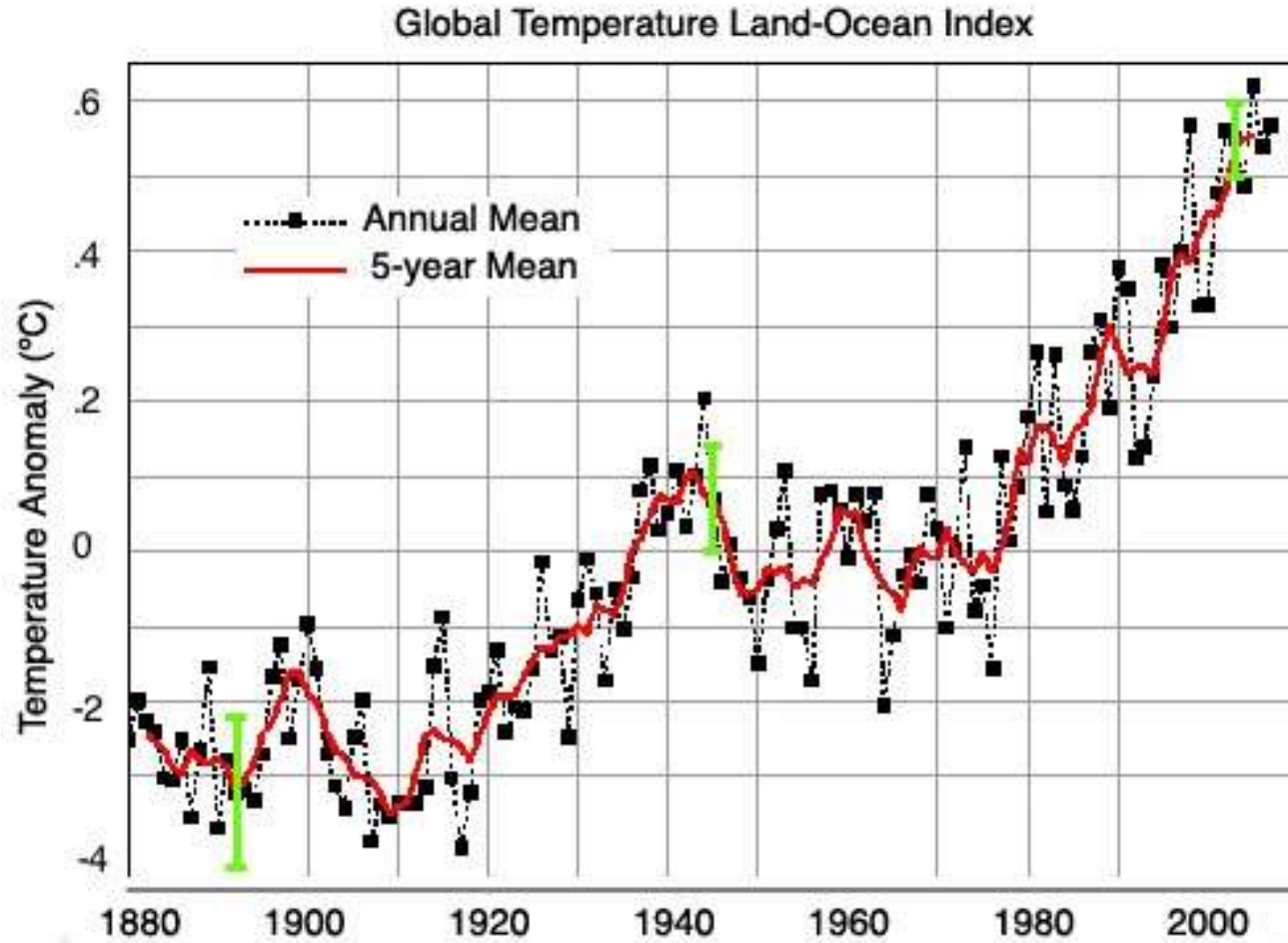


Hadley



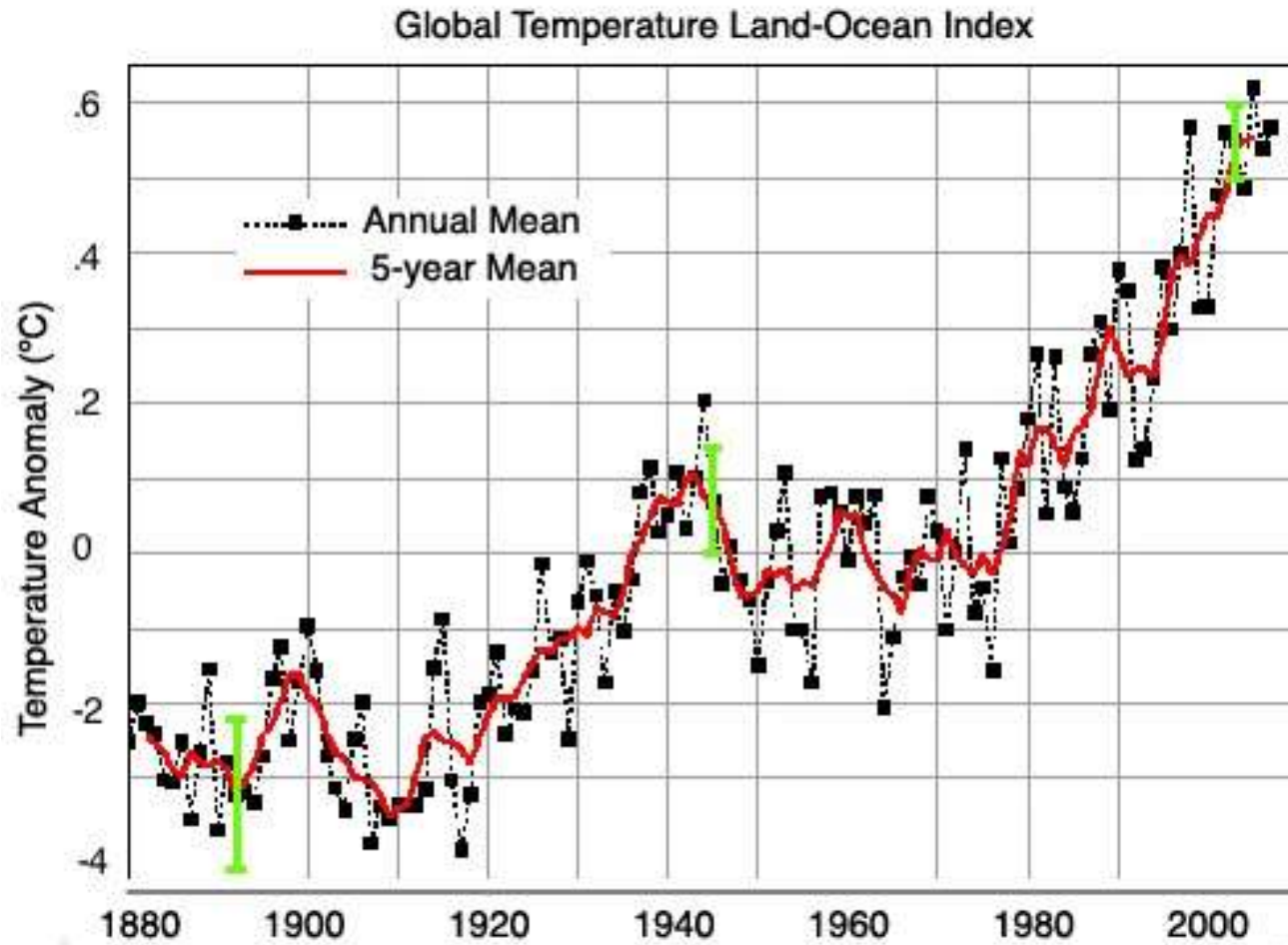
NOAA

NASA Average Temperature Profiles



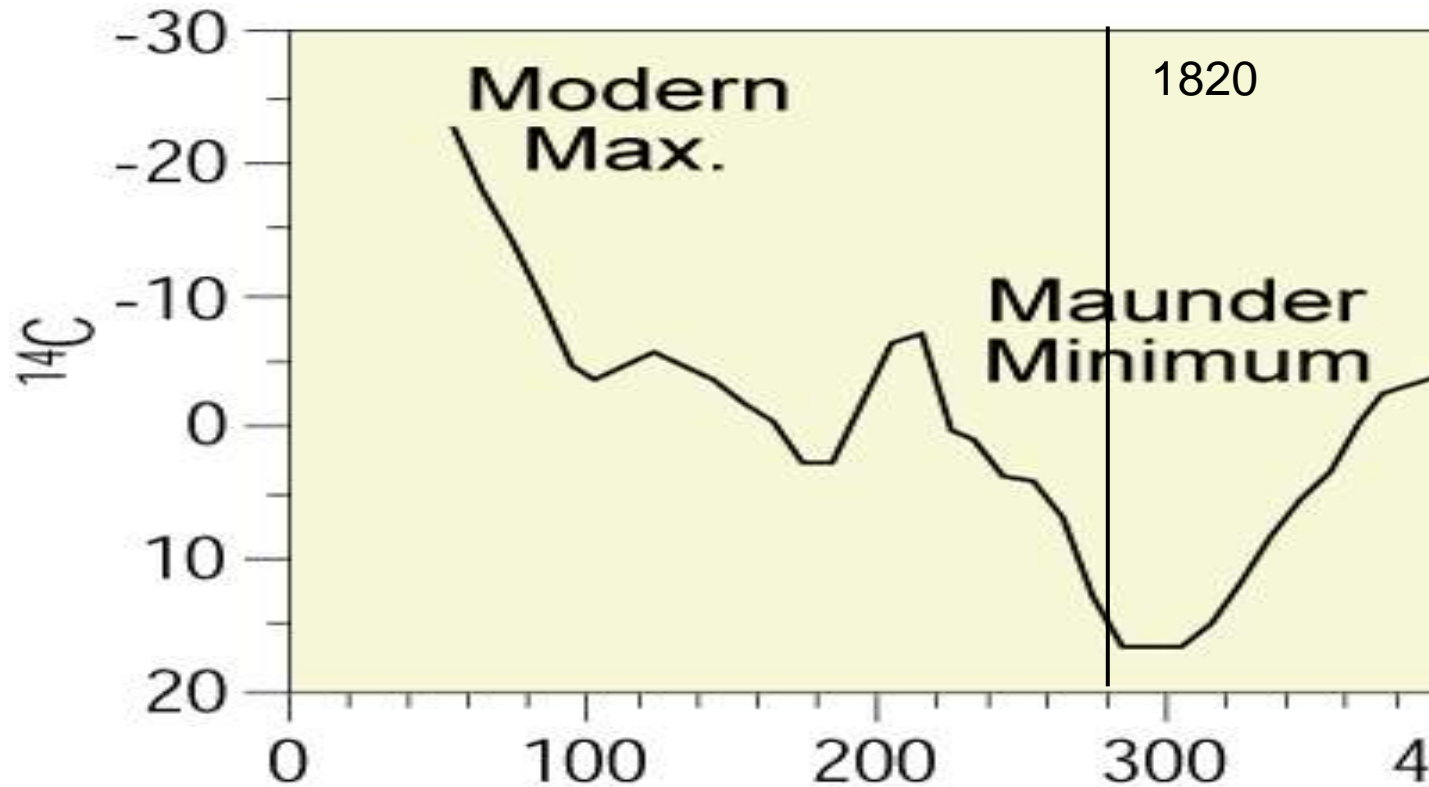
Vary from Year to Year
Recalculate using a 5-year mean

Average Temperature Anomalies



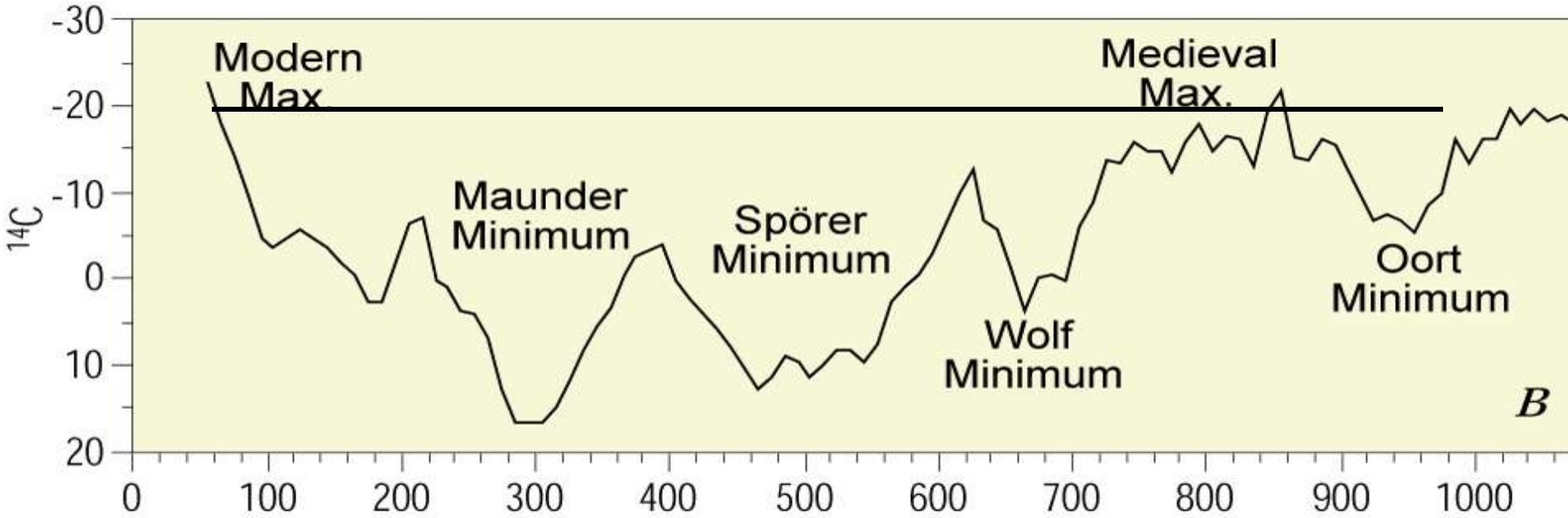
Difference from a Reference Temperature

The most common reference points are 1820 and 1880



Corresponds to the end of the
“Little Ice Age”

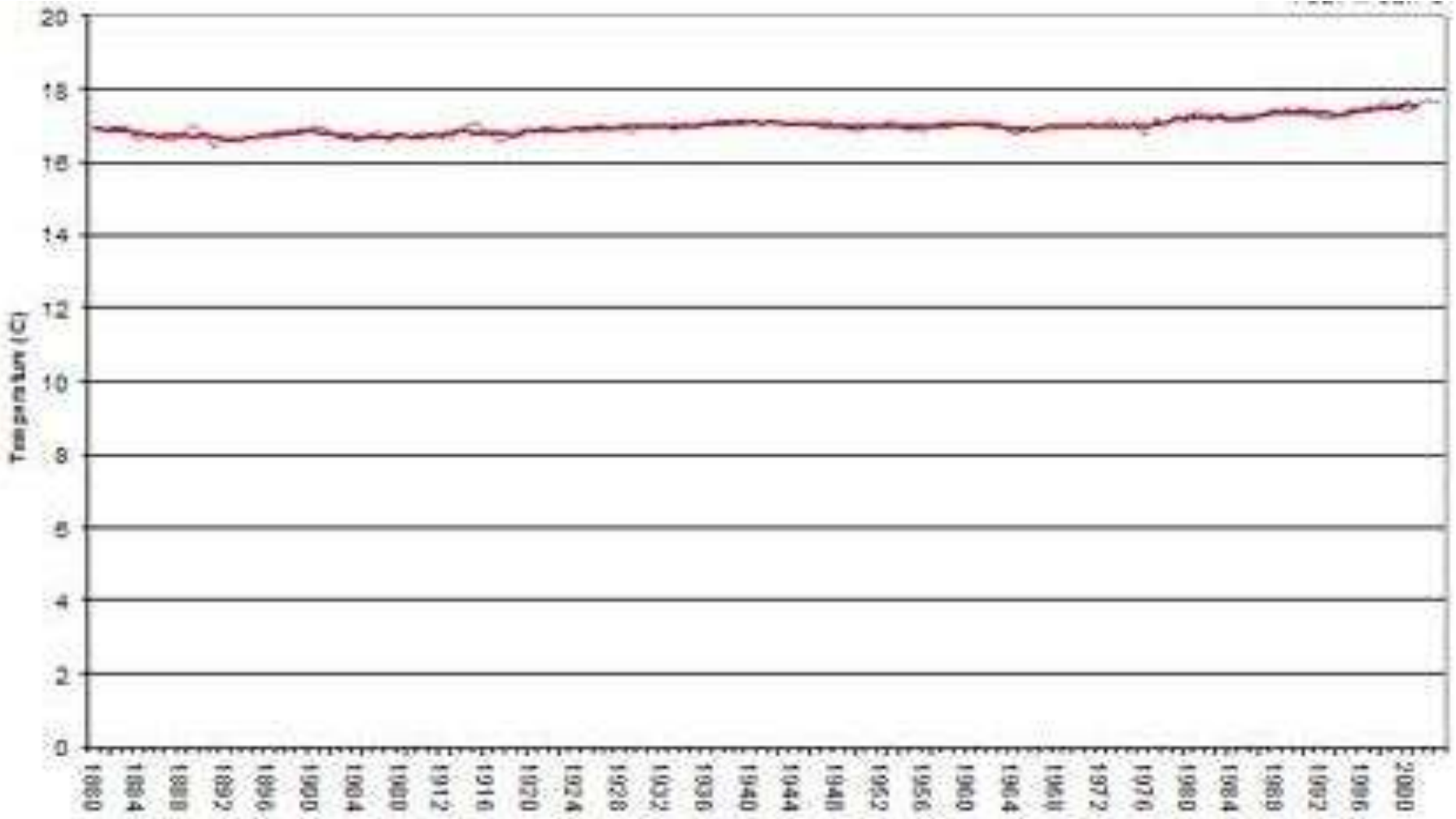
If we change the reference point to the Medieval Maximum



Then we are only just recovering from the “Little Ice Age”

Actual Average Temperature

Scaled in whole Degrees

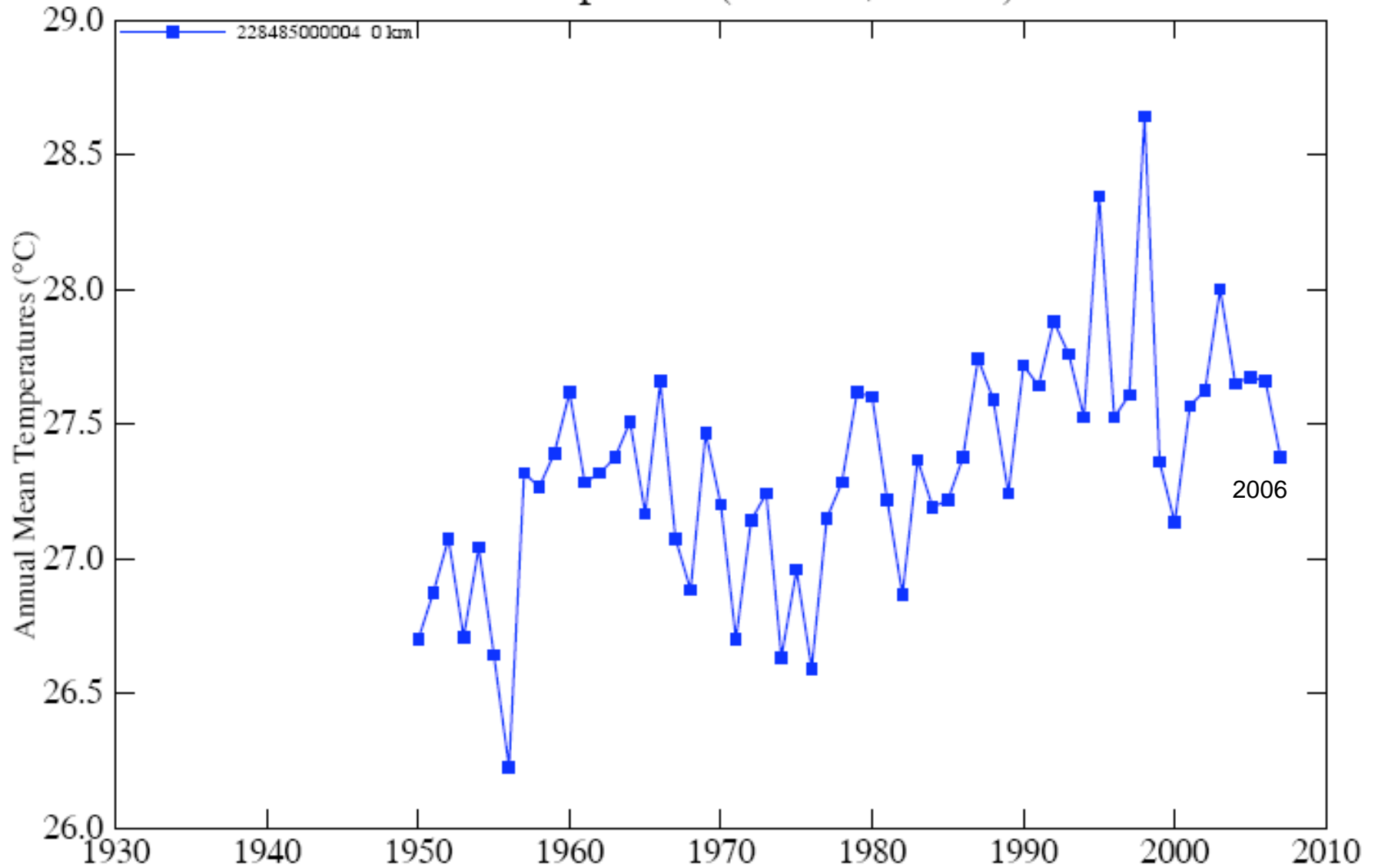


Global Mean Temperatures: 1880 - 2003

Question 1

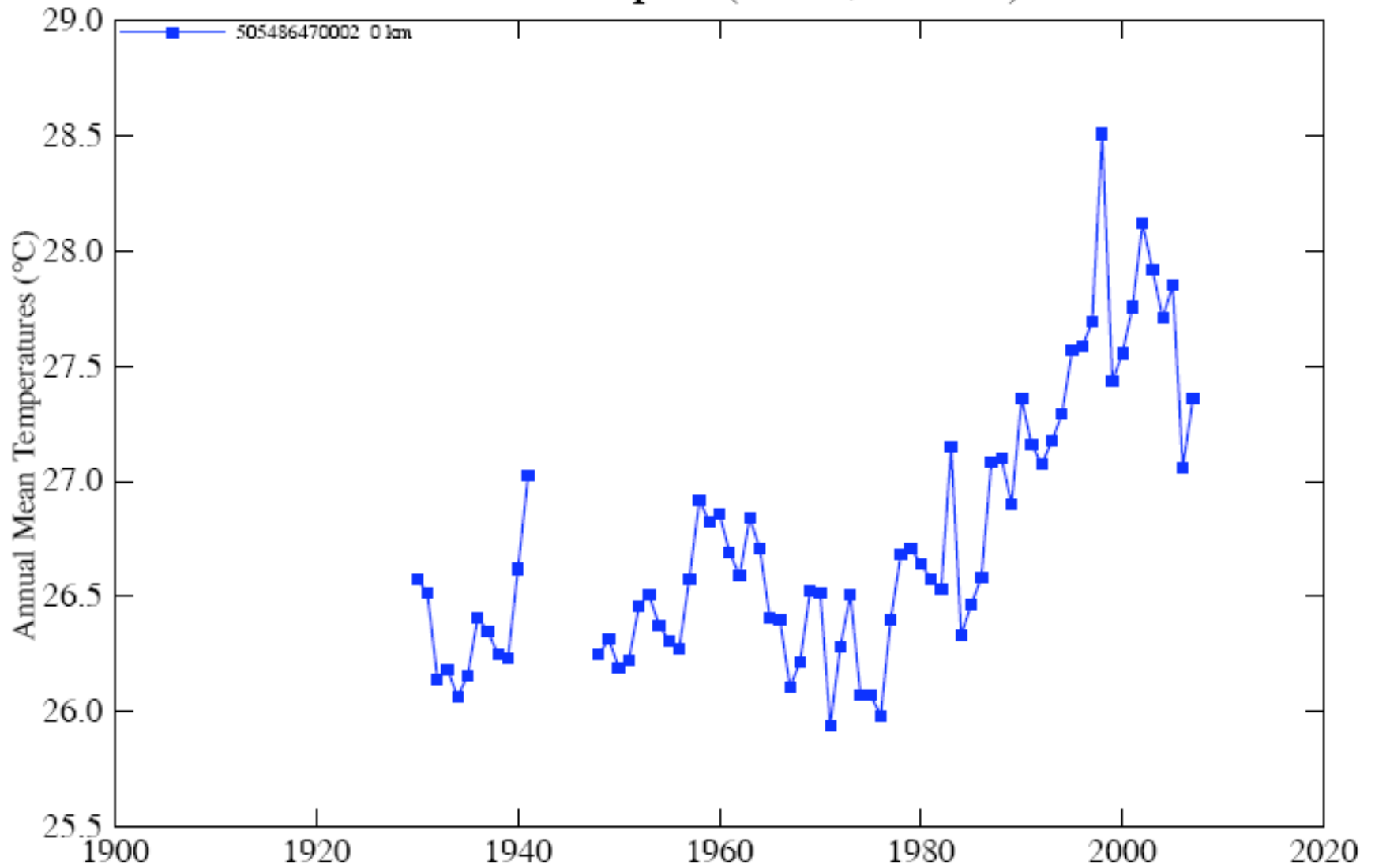
**What Are
Global Temperatures Doing
??????????**

Prachuap Khir (11.8 N,99.8 E)



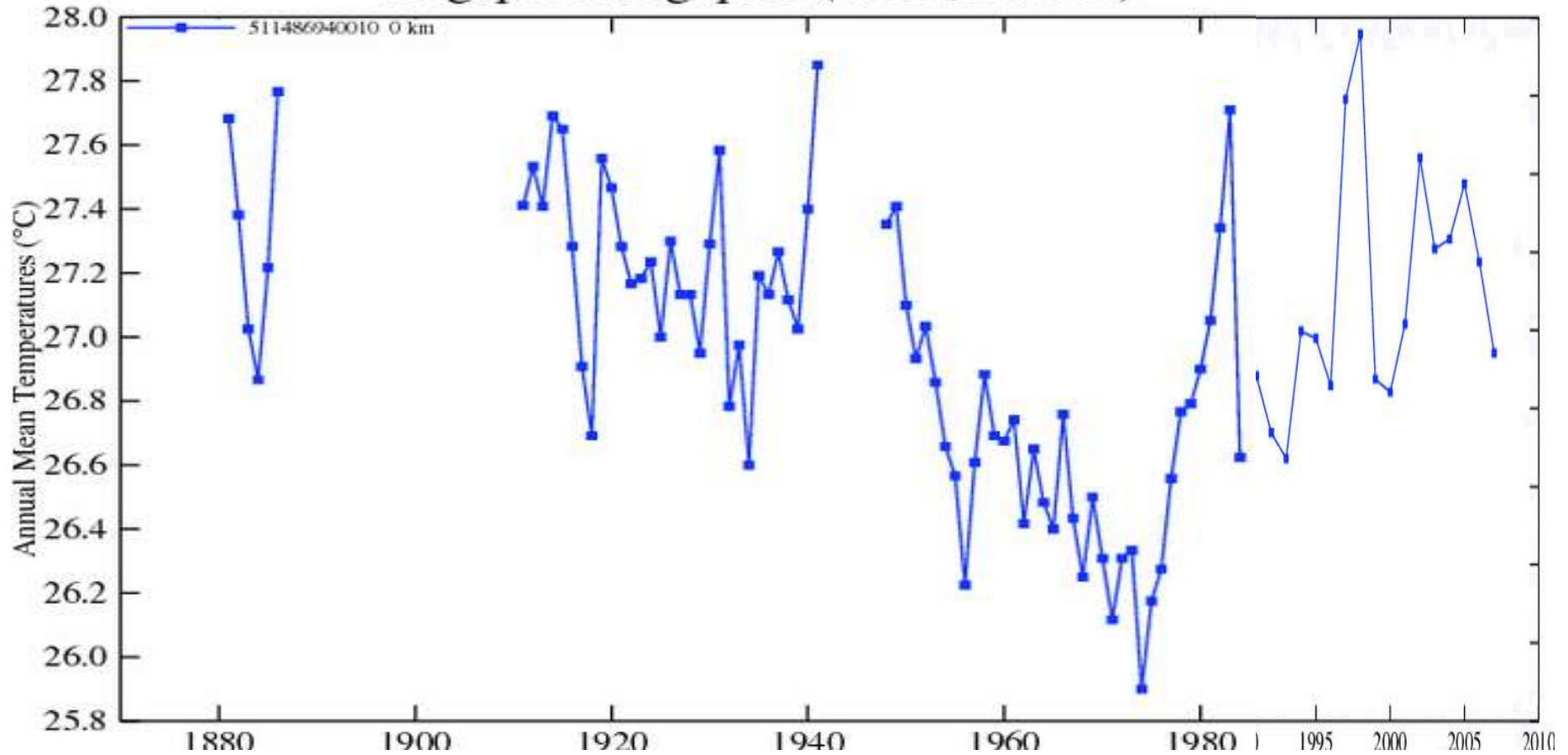
Bangkok

Kuala Lumpur/ (3.1 N,101.5 E)



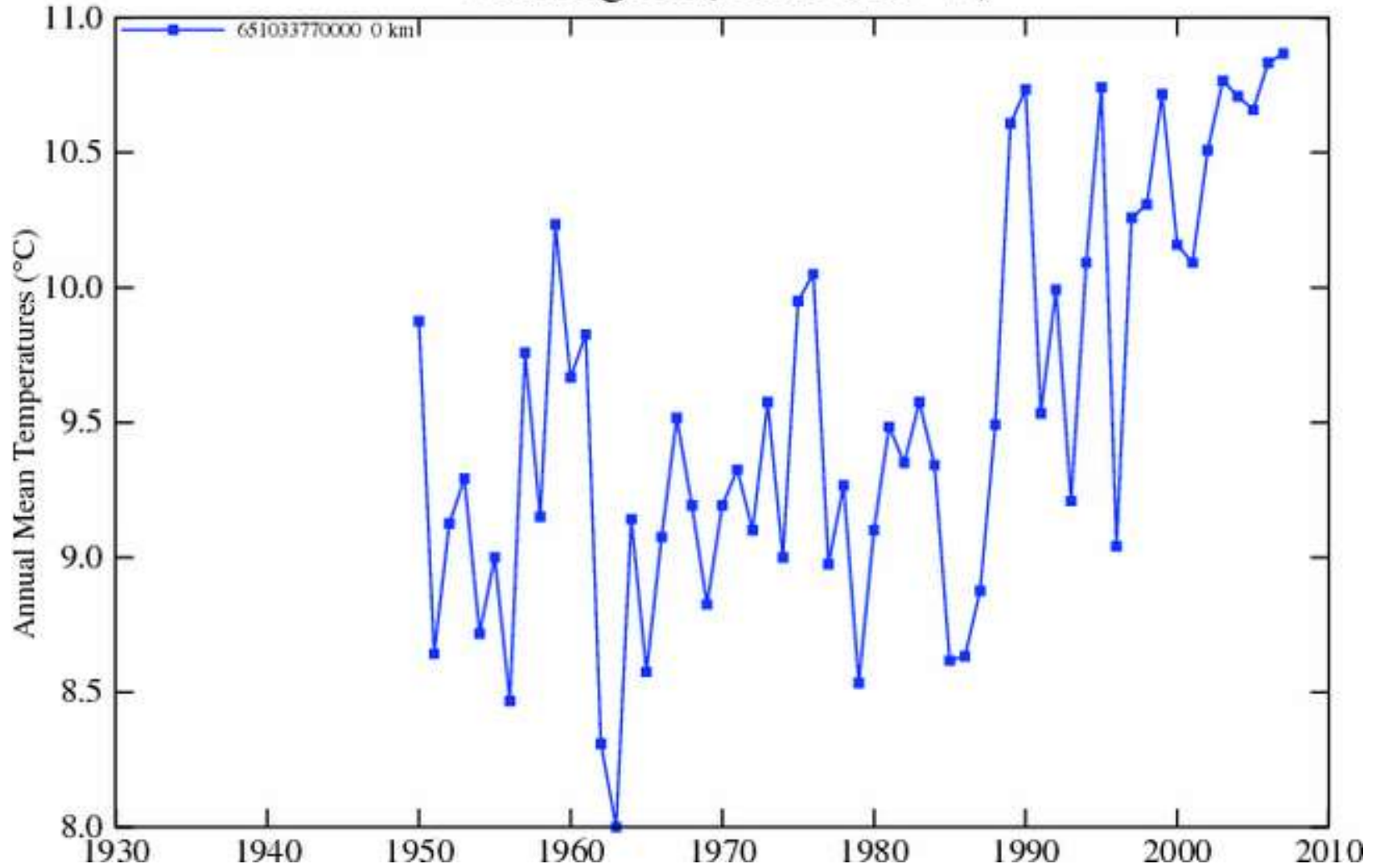
Kuala Lumpur

Singapore Singapore (1.3 N,103.9 E)



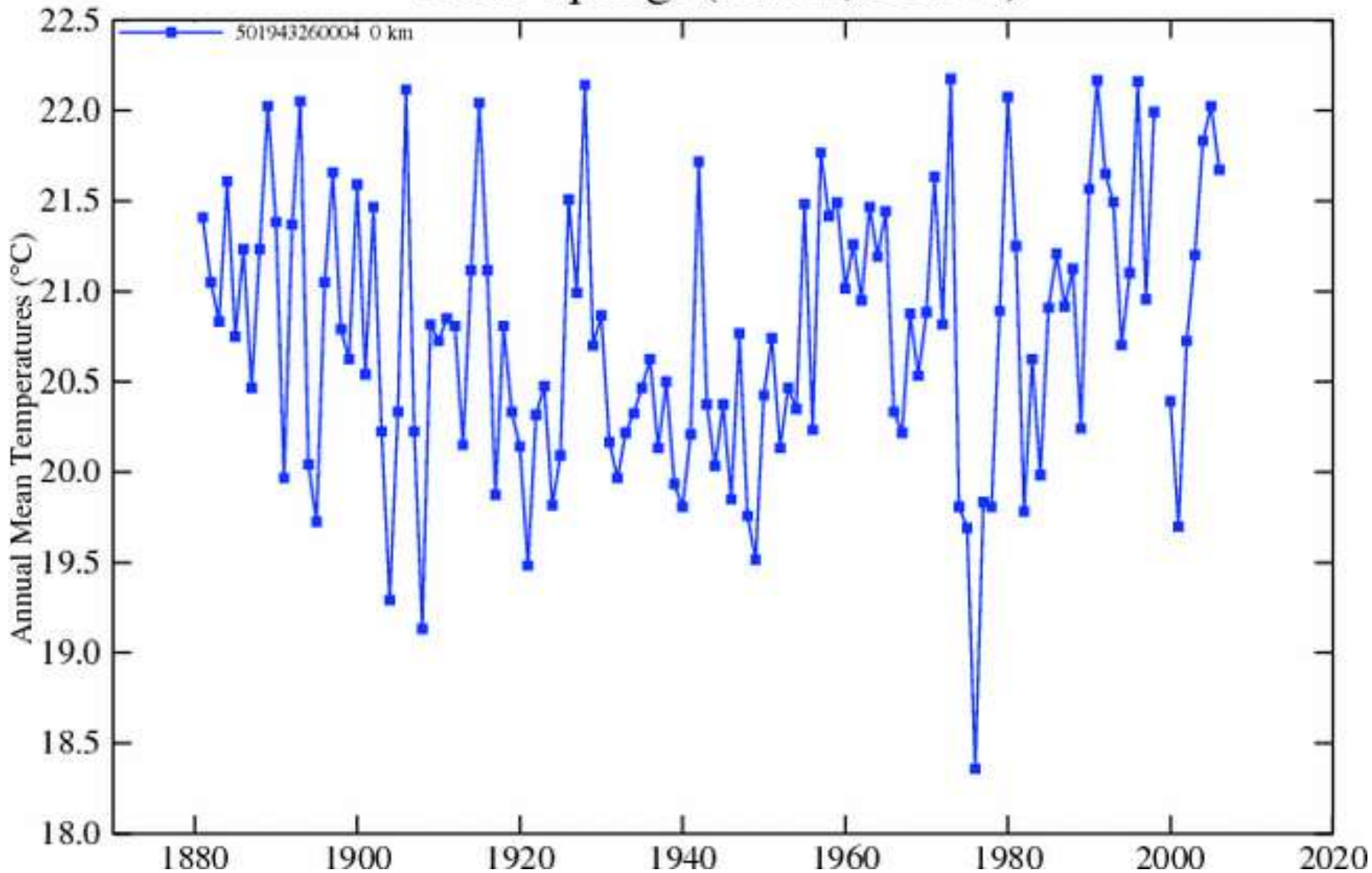
Singapore

Waddington (53.2 N,0.5 W)



Surrey, UK

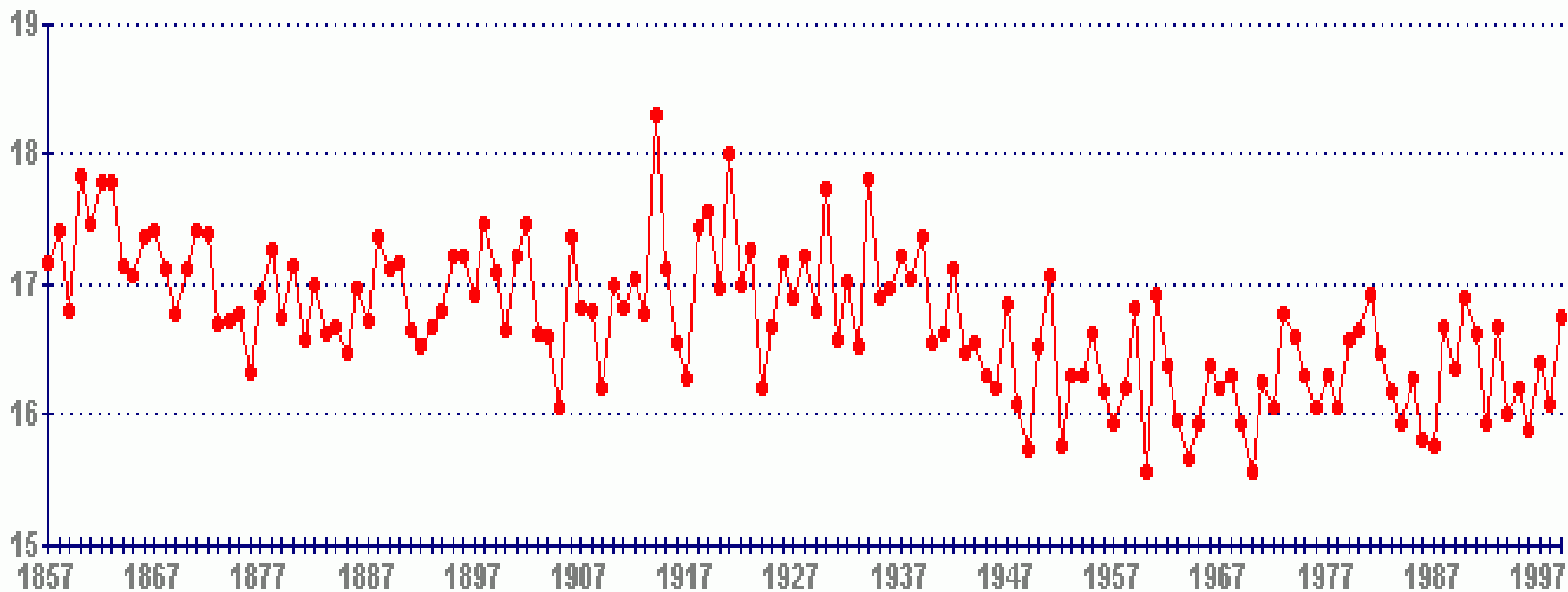
Alice Springs (23.8 S,133.9 E)



Alice Springs

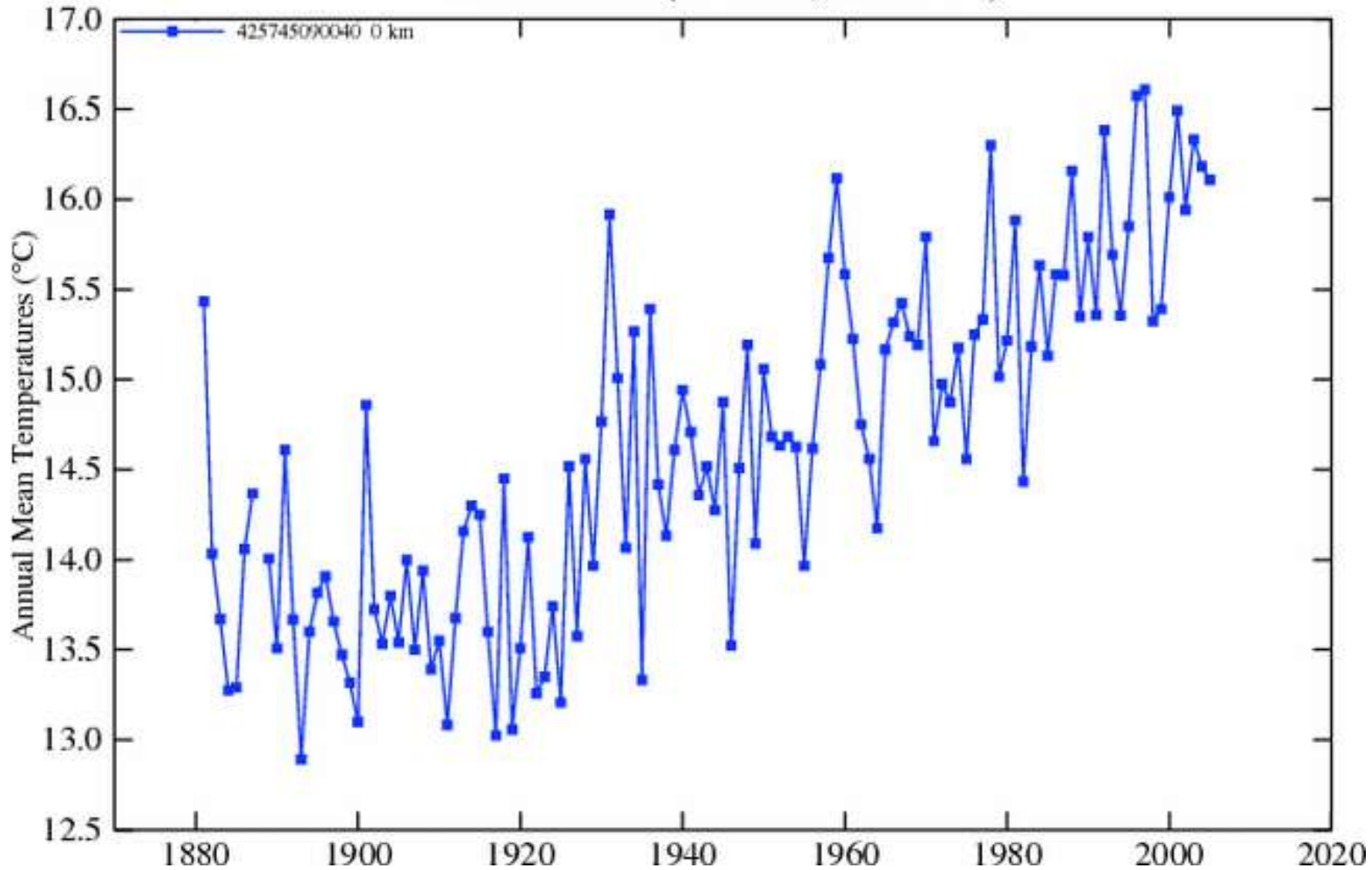
Adelaide, South Australia 1857-1999

Annual Mean Temperature



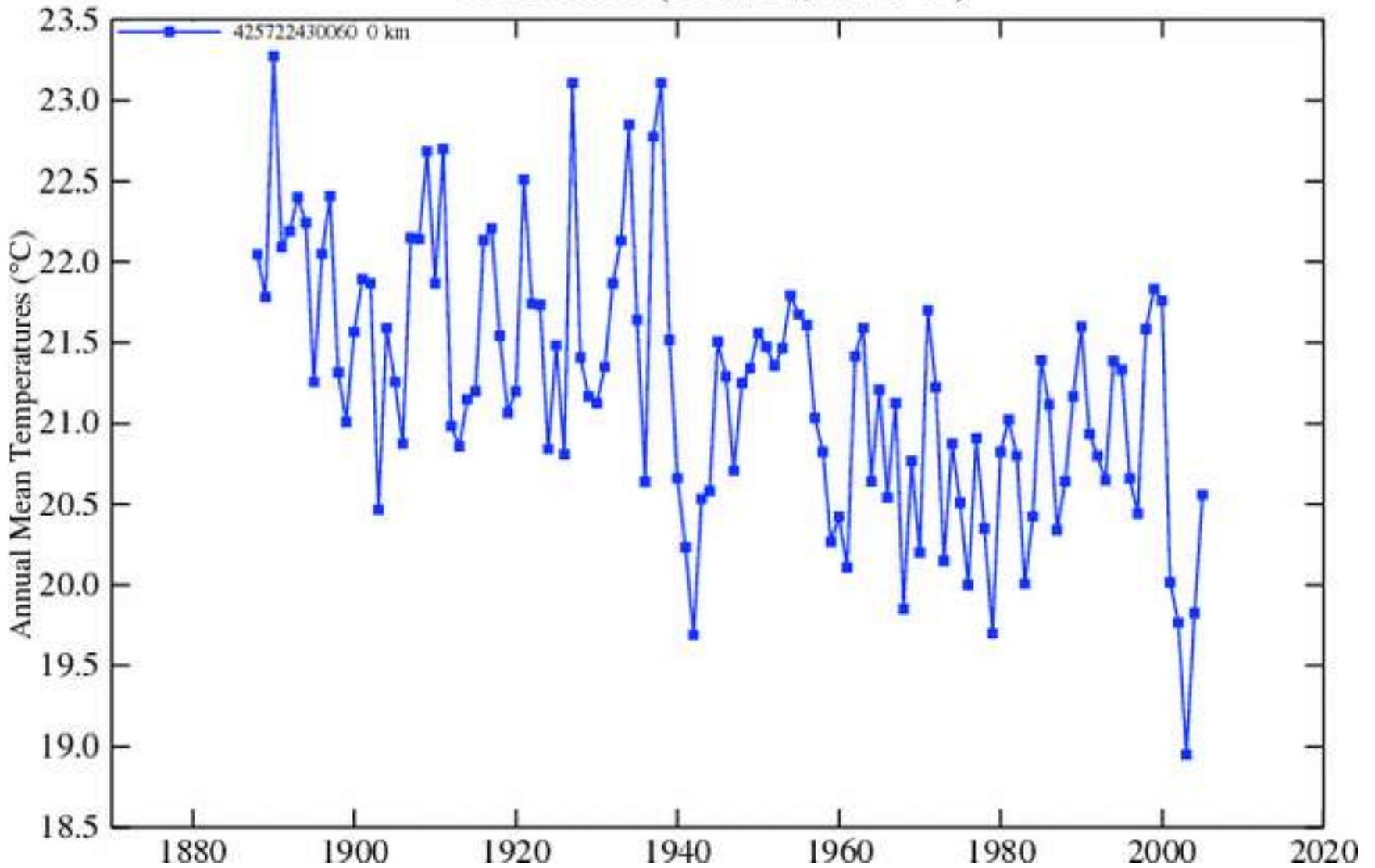
—●— Mean Temp. [°C]

Livermore (37.7 N, 121.8 W)



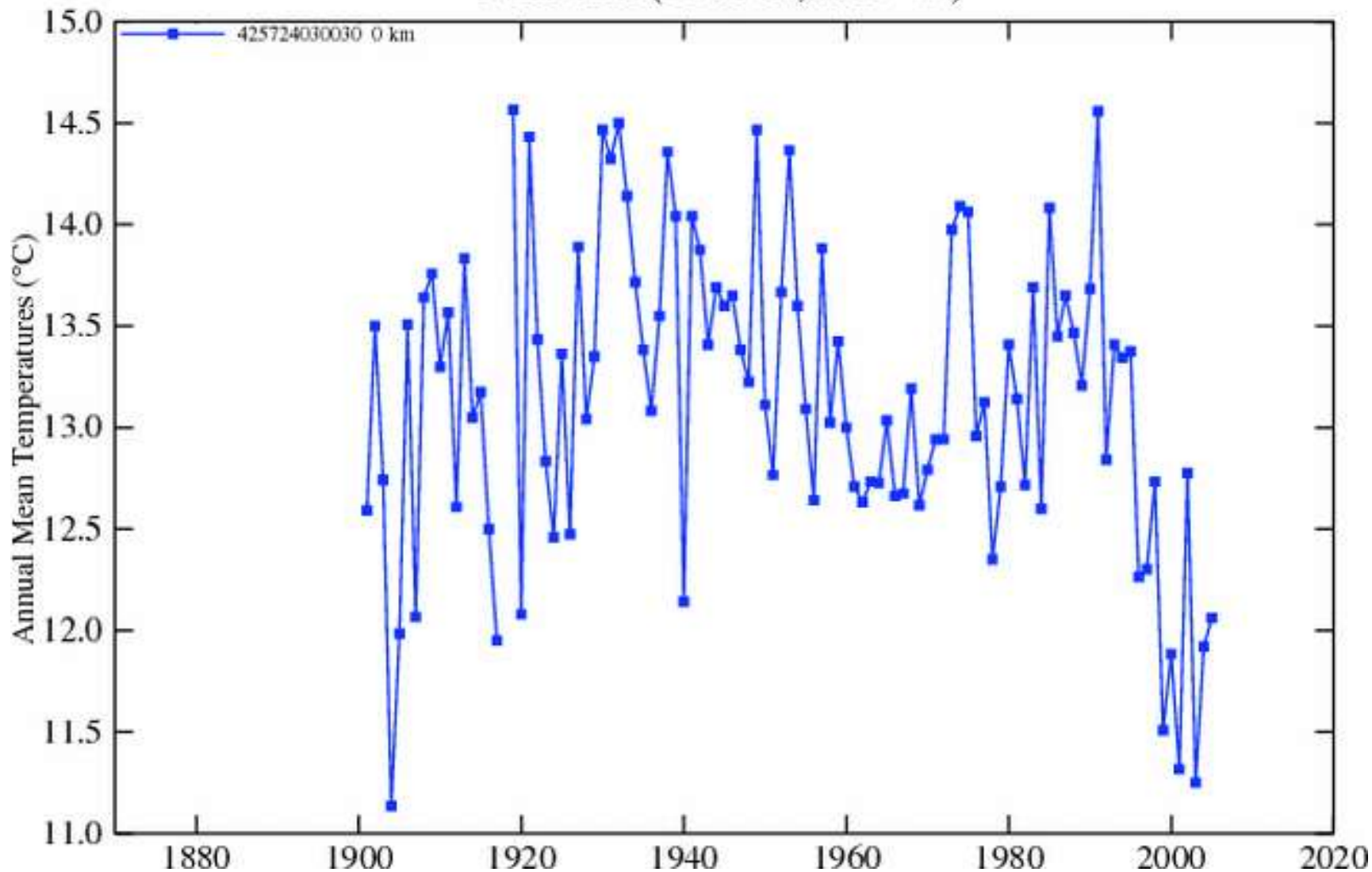
San Francisco

Brenham (30.2 N,96.4 W)

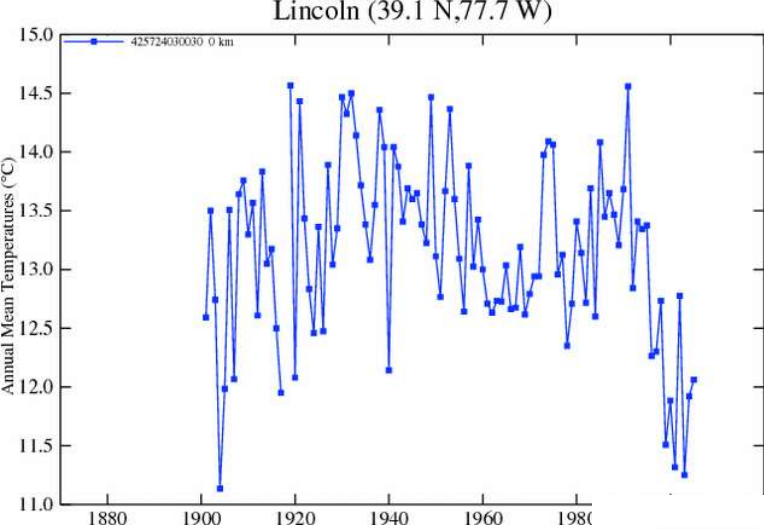


Houston, TX

Lincoln (39.1 N, 77.7 W)

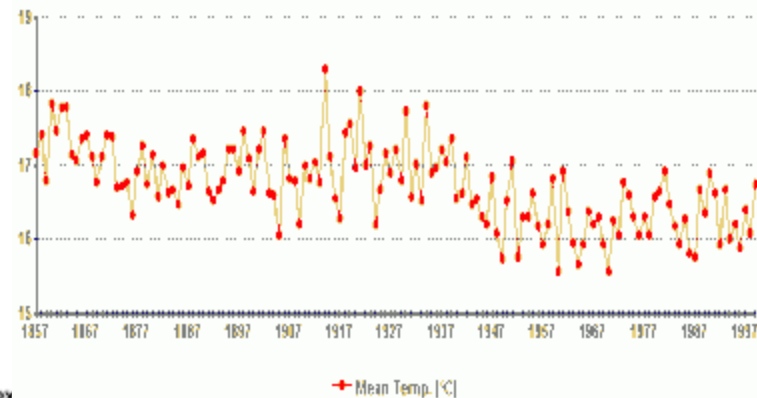


Washington DC

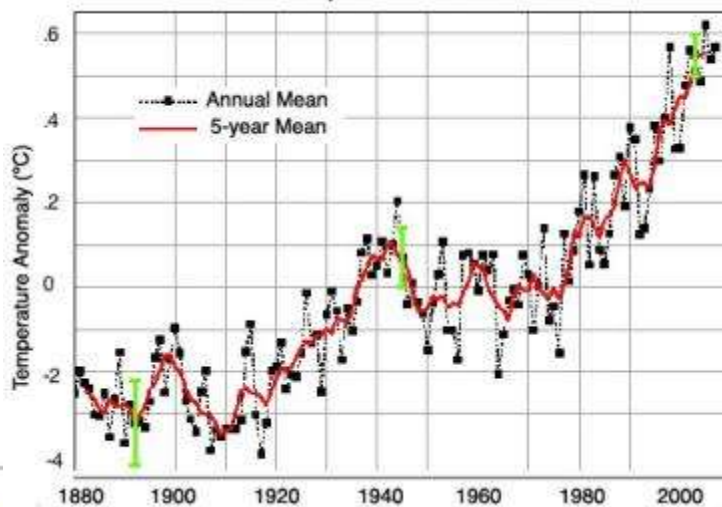


Adelaide, South Australia 1857-1999

Annual Mean Temperature

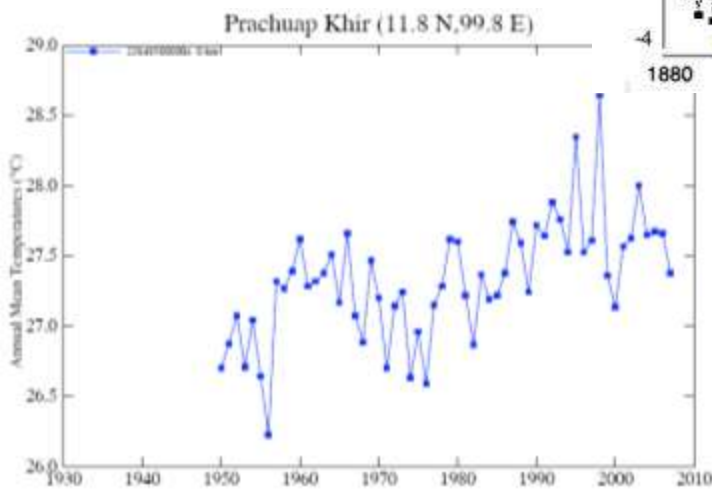


Global Temperature Land-Ocean Index

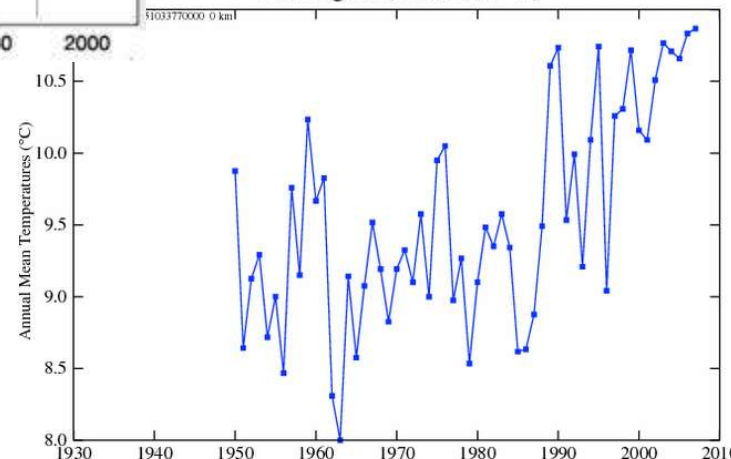


Actual
Station
Temperatures

Average
Temperature
Profiles



Waddington (53.2 N, 0.5 W)





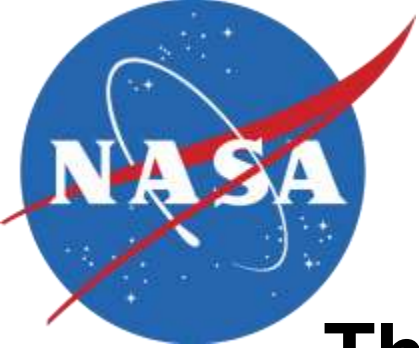
The IPCC states

Warming of the Climate System is Unequivocal

1/3 of stations are clearly warming since 1970

1/3 of stations are flat since 1970

1/3 of stations are generally cooling since 1970



NASA States

The five warmest years over the last century have been

2005

1998

2002

2003

2006.

Correct for only 1/3 of the Data



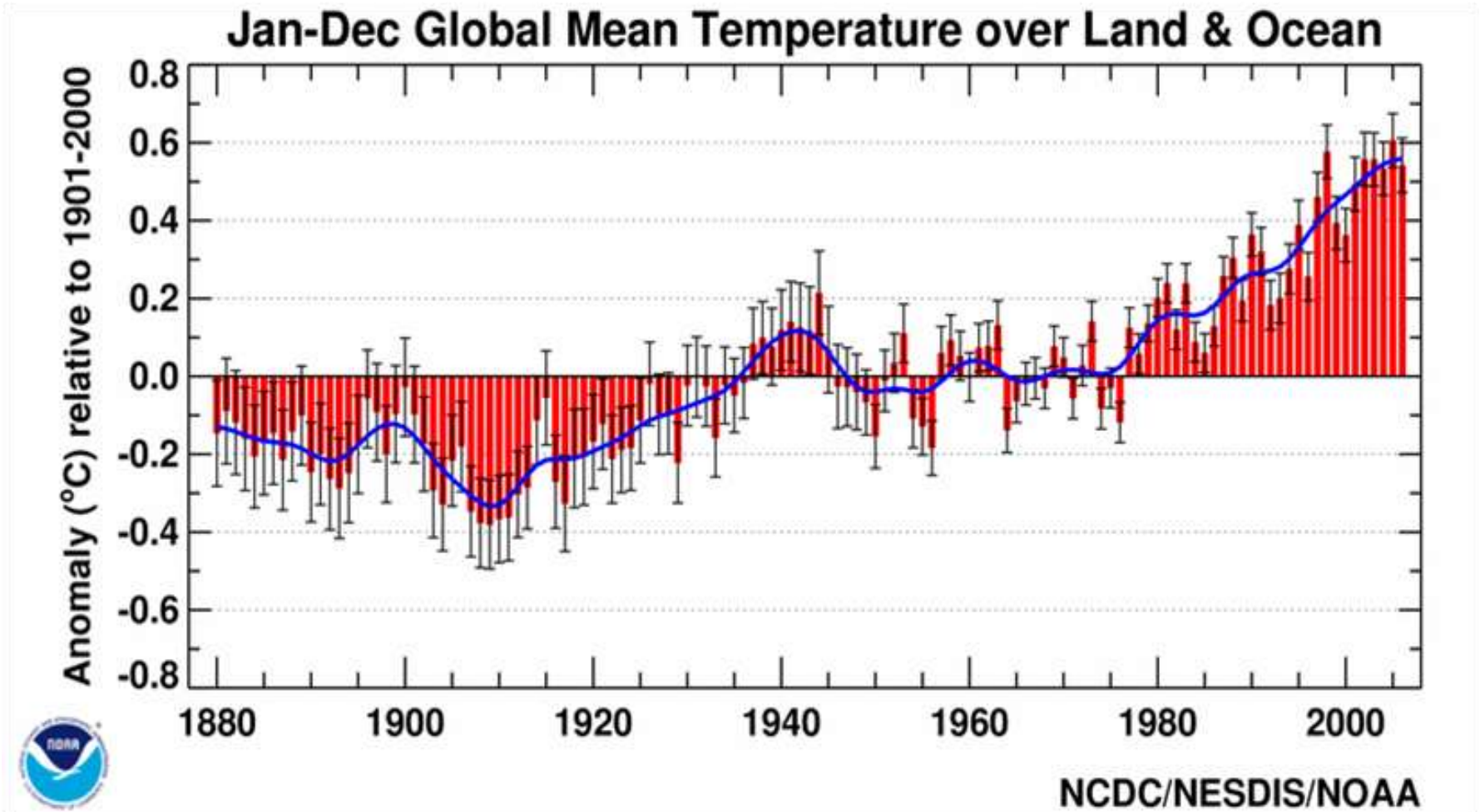
IN KCINCT

TODAY'S DEFINITION OF ABOVE AVERAGE RAINFALL

Question 1

**What Are
Global Temperatures Doing
????????????????????
????????????????????**

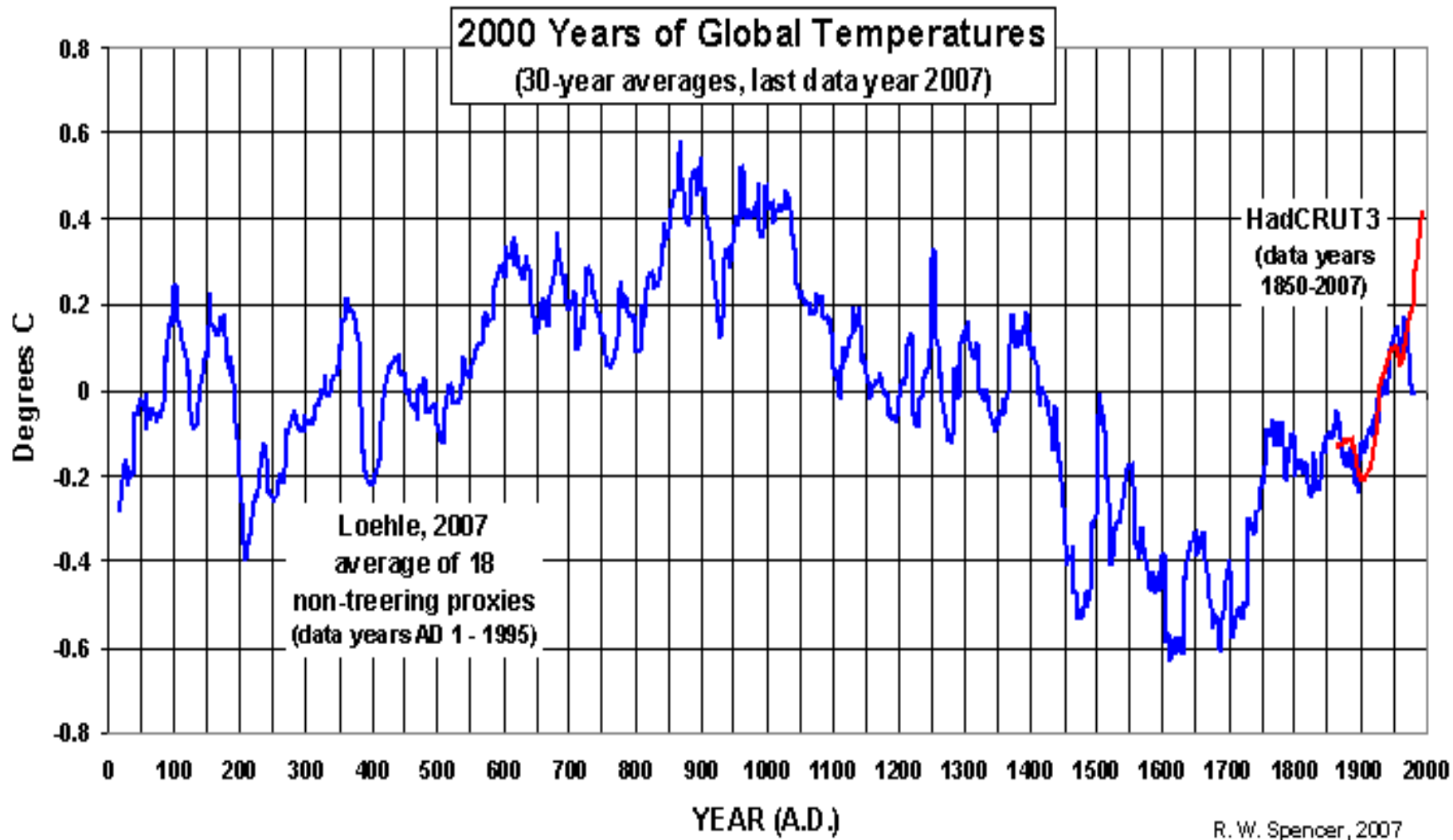
Best Short-Term Curve



NOAA

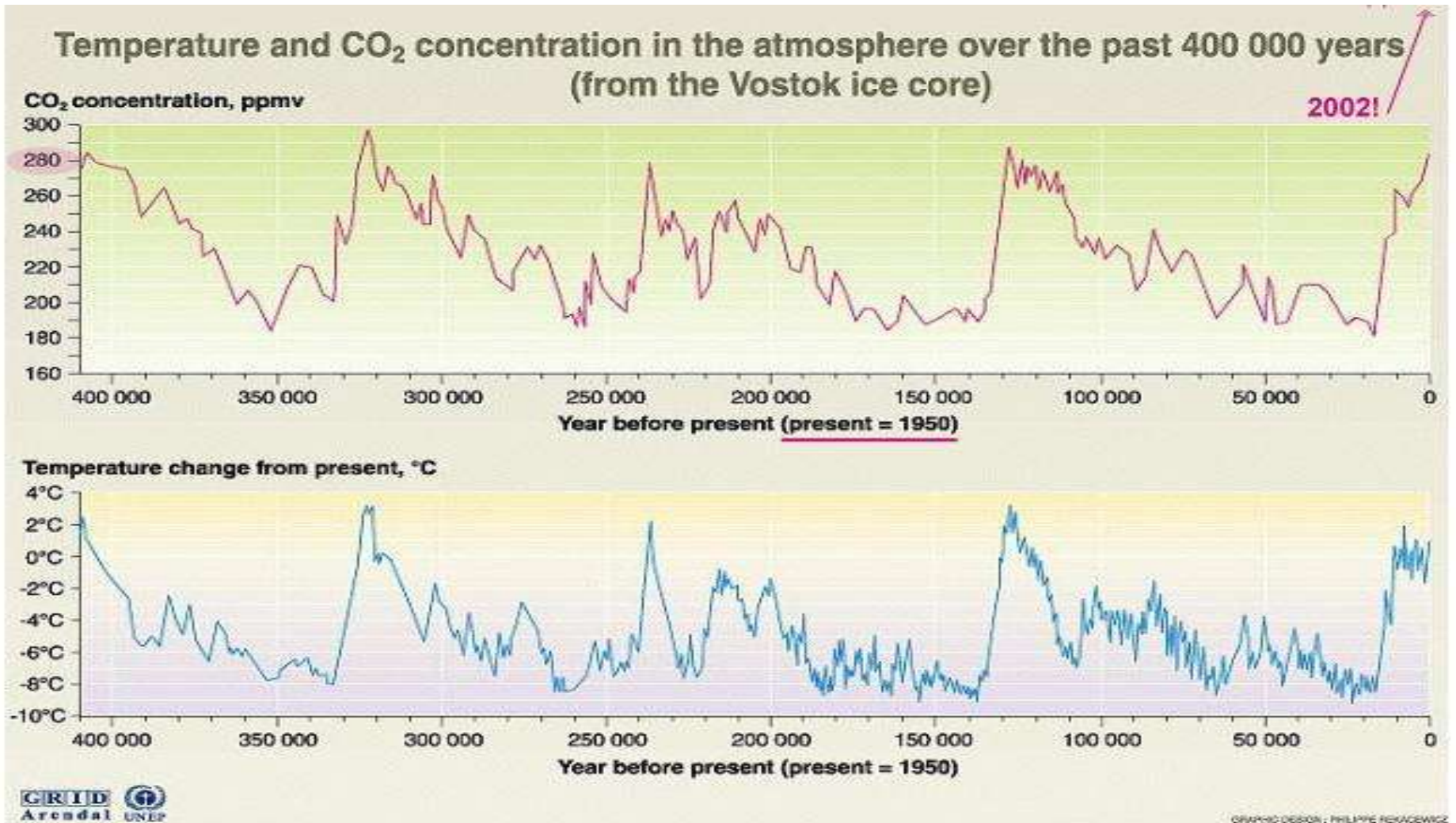
National Oceanic and Atmospheric Association

Best Medium-Term Curve



Loehle (2007)

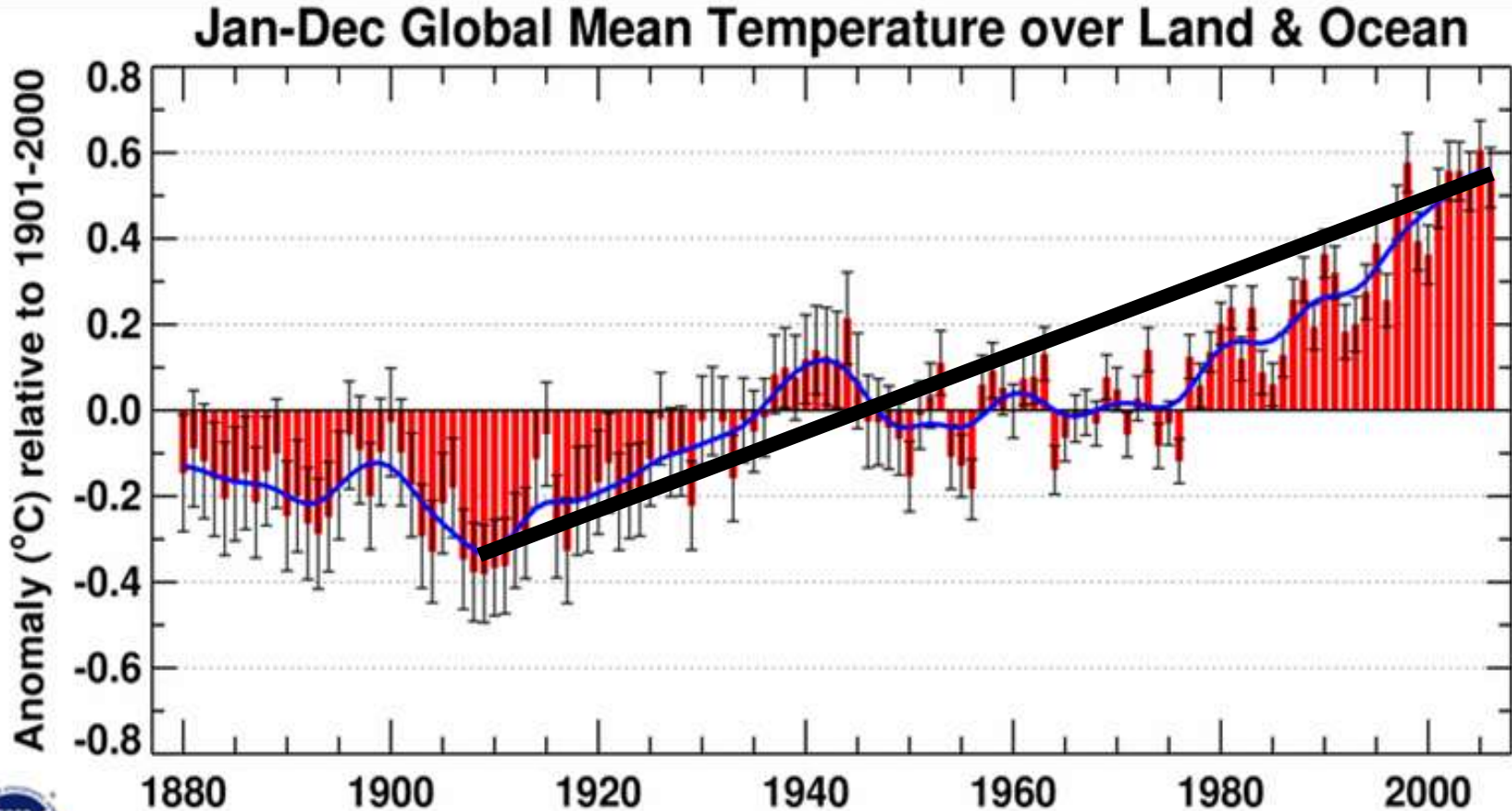
Best Long-Term Curve



Source: J.R. Petit, J. Jouzel, et al. Climate and atmospheric history of the past 420 000 years from the Vostok ice core in Antarctica. *Nature* 399 (3 June), pp 429-436, 1998.

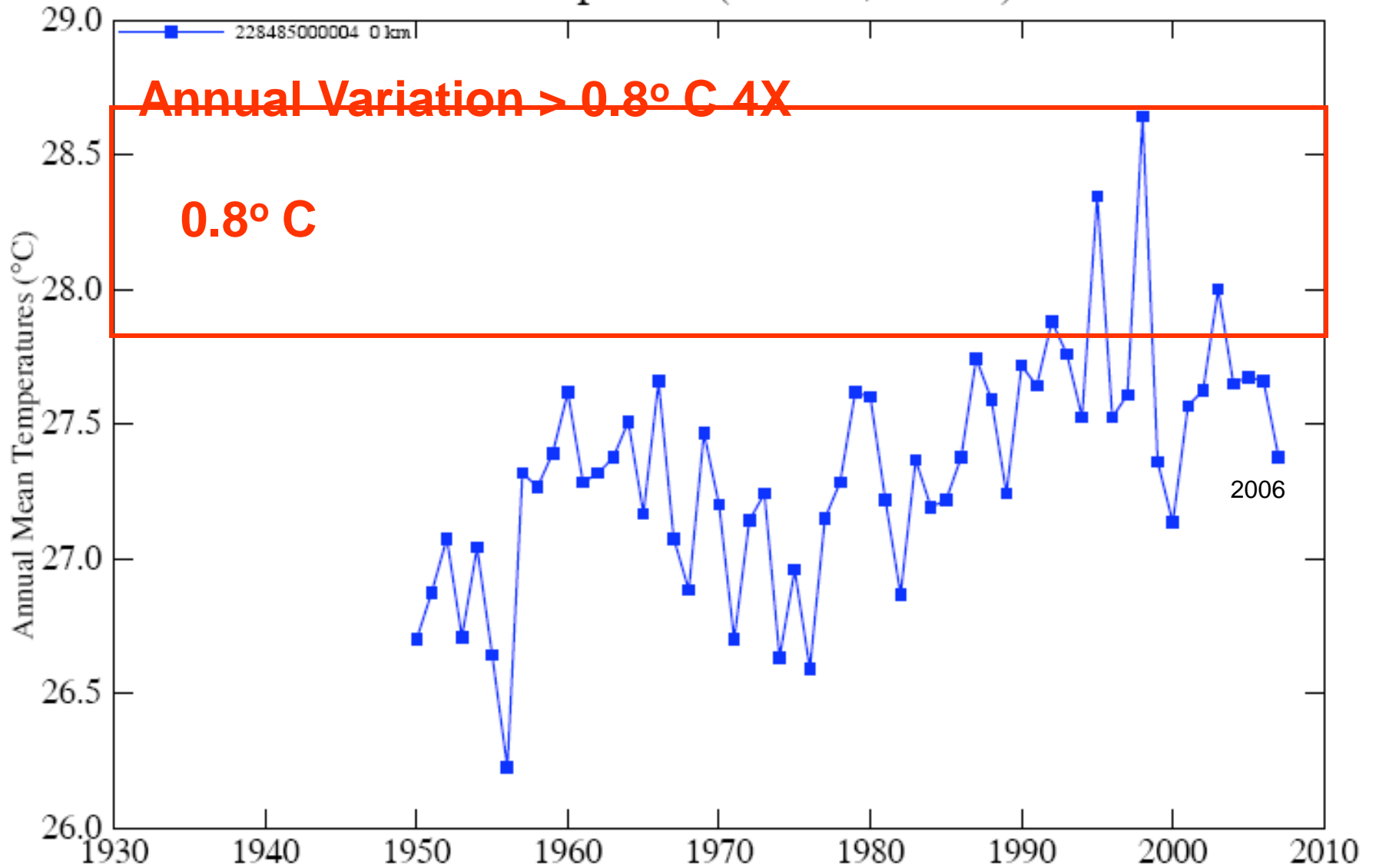
**Note: Global Warming started 15,000 years ago
Not Human Caused**

What Are Global Temperatures Doing?



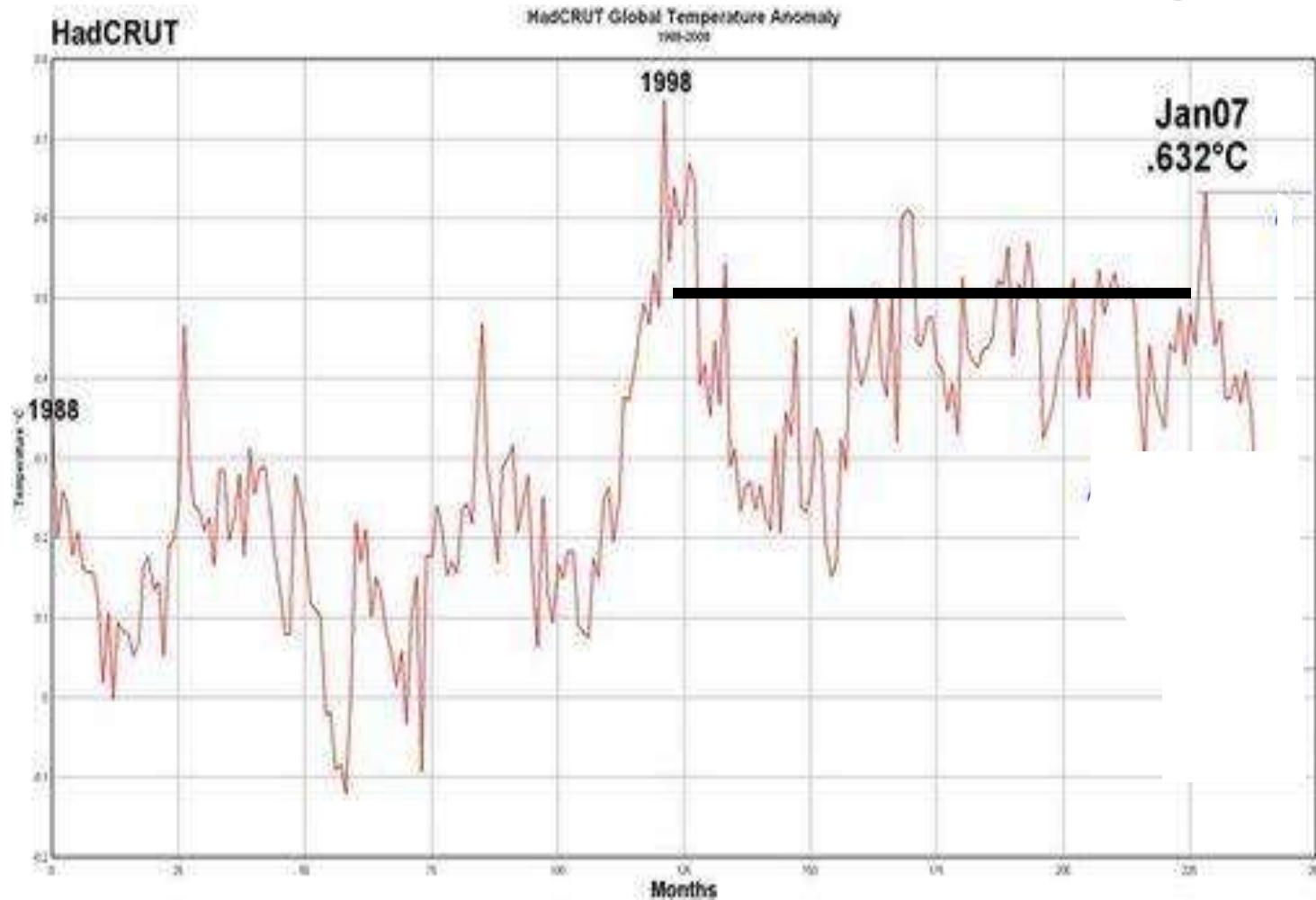
Warmed 0.8° C from 1910 to 1998
0.009 of a Degree / year

Prachuap Khir (11.8 N,99.8 E)



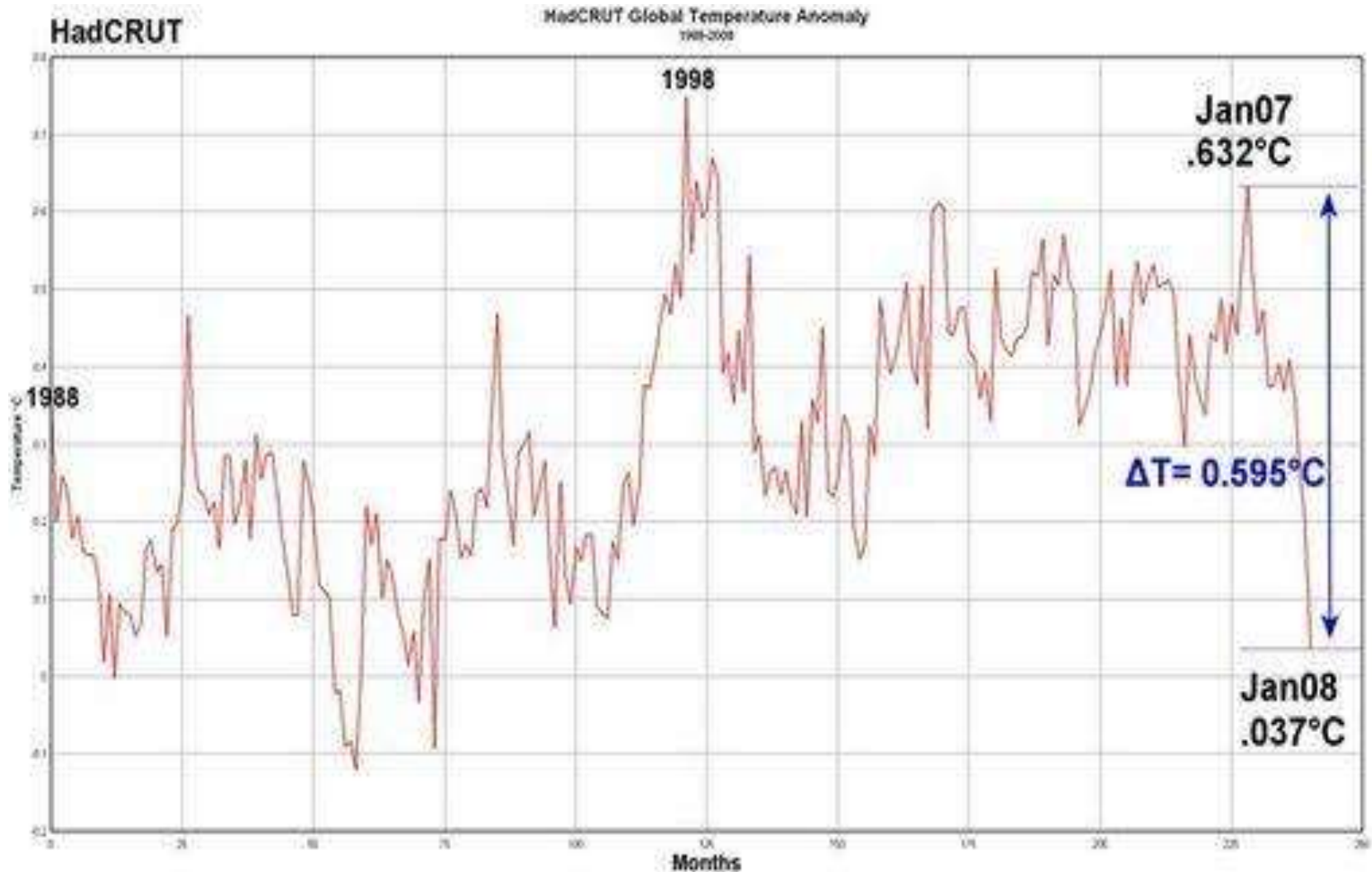
Bangkok

What Are Global Temperatures Doing?



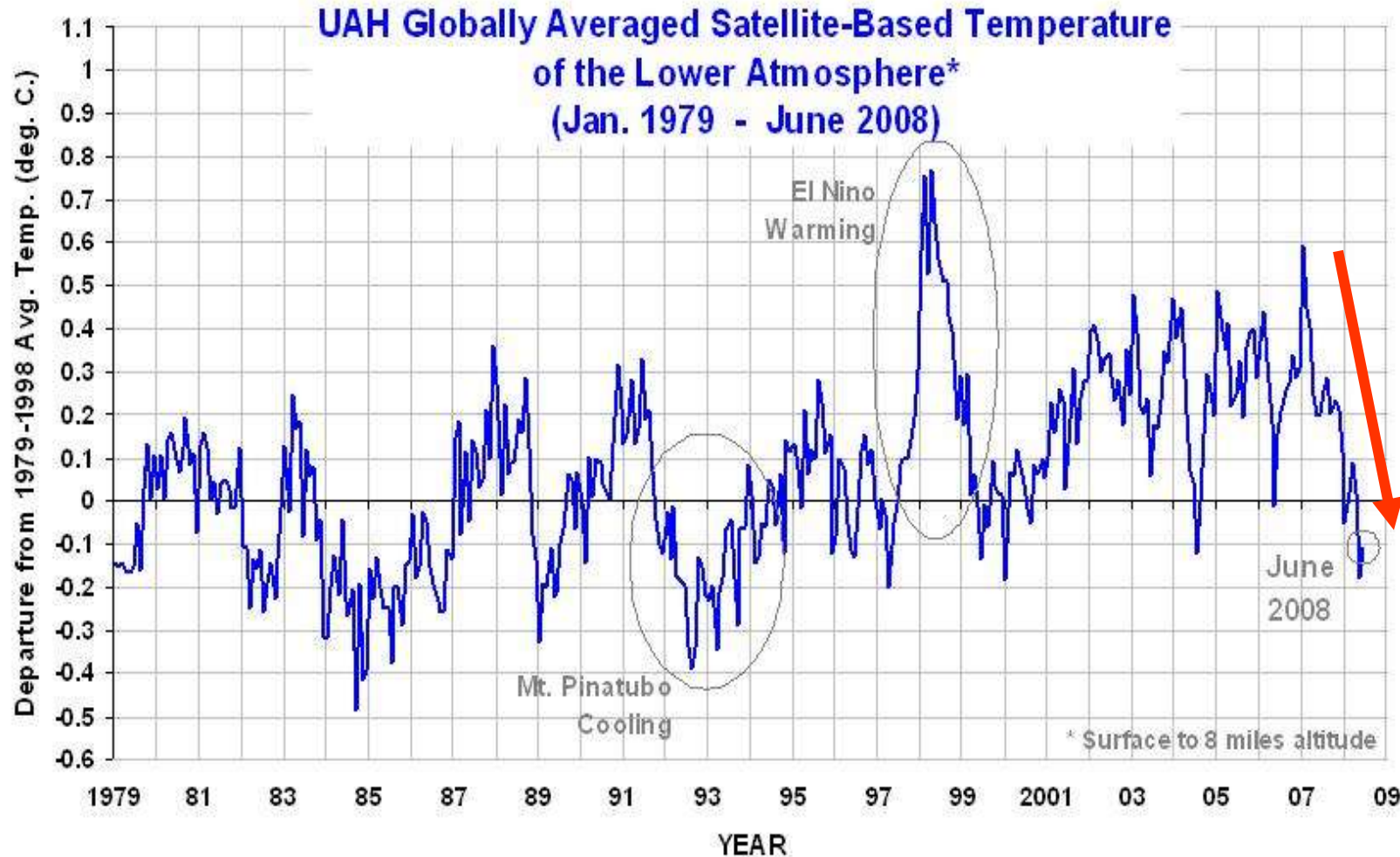
**Temperatures have been Flat to Cooling
from 1998 to 2007**

What Are Global Temperatures Doing?



From 2007 to Present, Cooled 0.6° C

What Are Global Temperatures Doing?



Satellite data confirms the cooling

Question 2

**Why Are
Global Temperatures Doing
What They Are?**

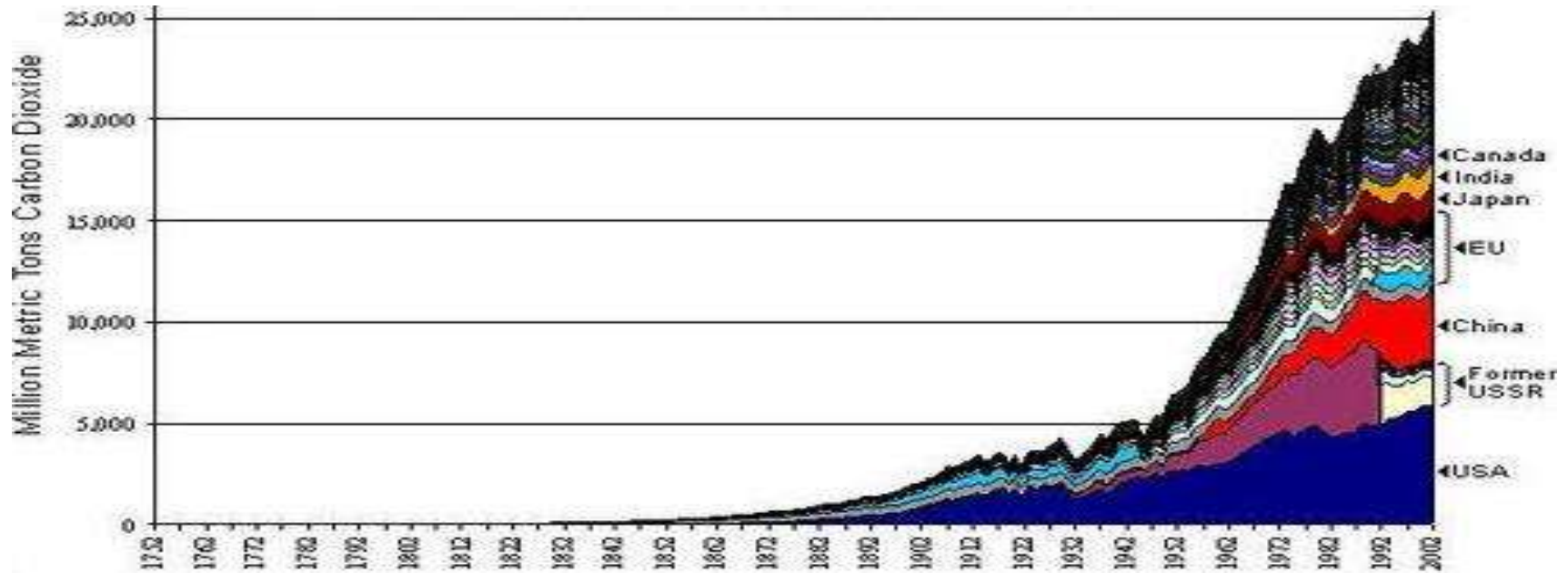
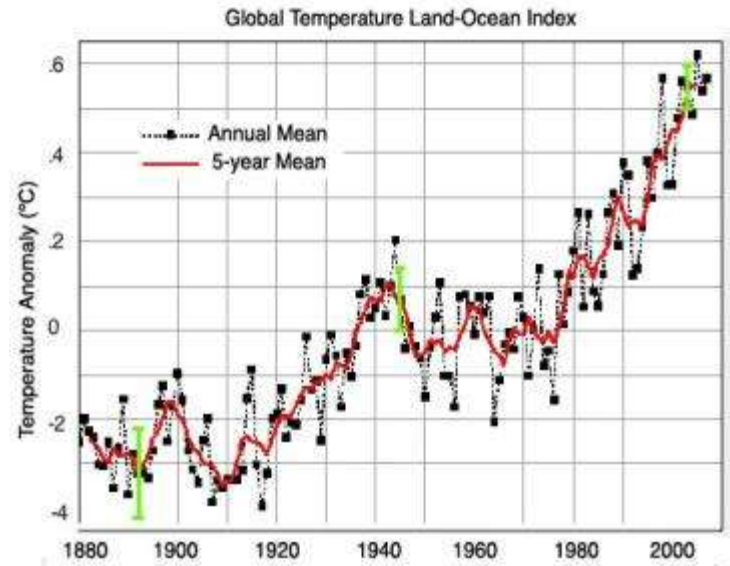
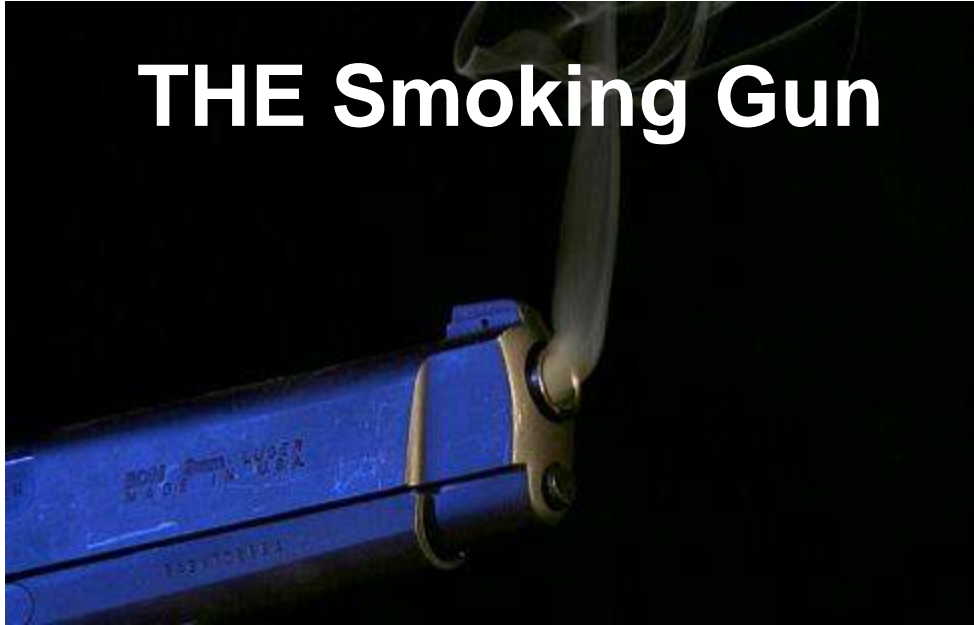
The Cause of Global Warming

The IPCC states:

Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic green house gas concentrations

**Humans Cause CO₂ to Increase
CO₂ Increases Temperature
Humans Cause Global Warming**

THE Smoking Gun

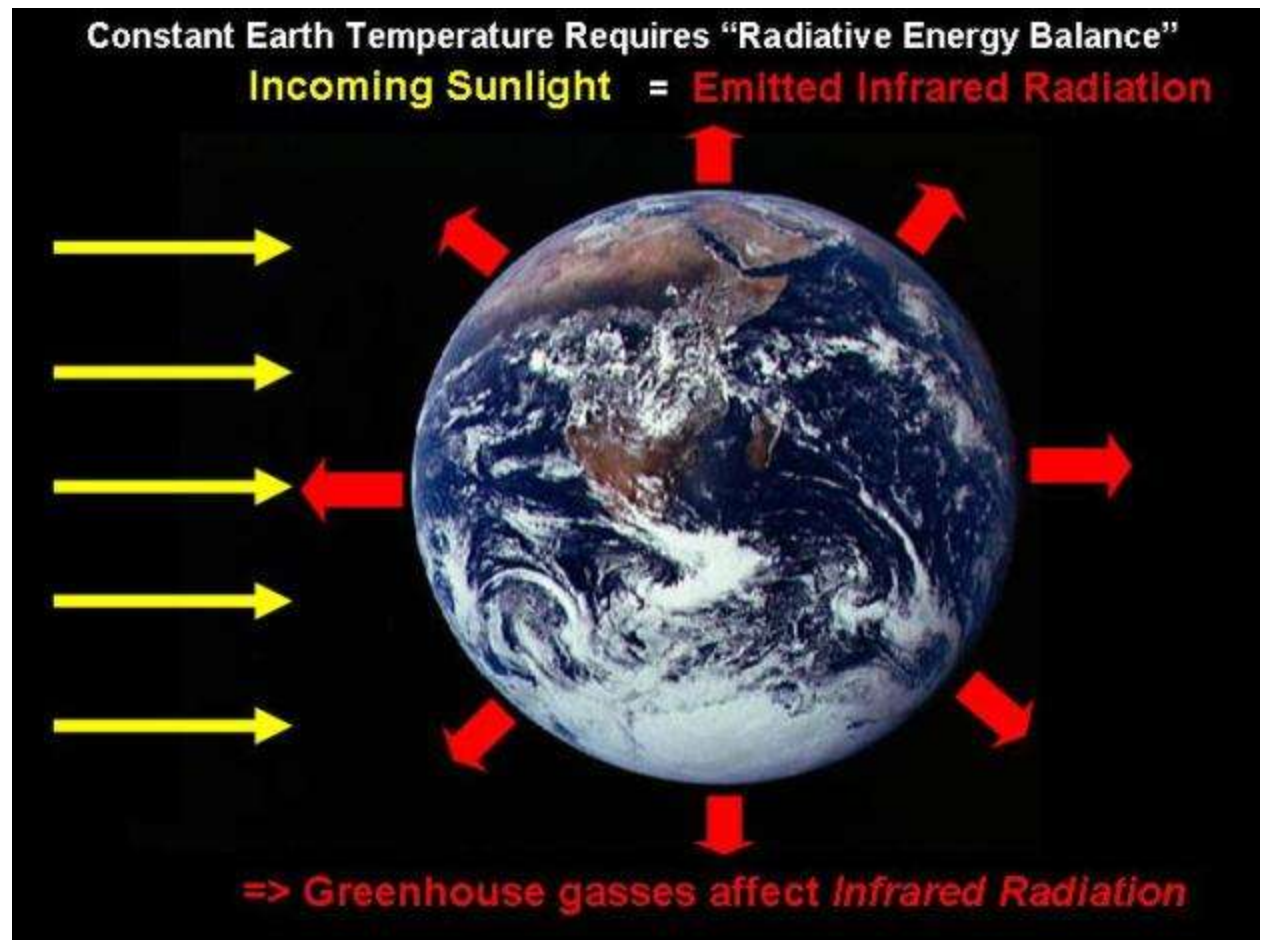


Global CO₂ Emissions from Fossil Fuel Burning

Flaw 1

Earth is Not A Greenhouse

Earth is
Not a
Closed
System



Flaw 2

The greenhouse signature is missing



The signature of an increased greenhouse effect is a hot spot 10km up in the atmosphere over the tropics.

Radiosonde Data show no hot spot.

Flaw 3

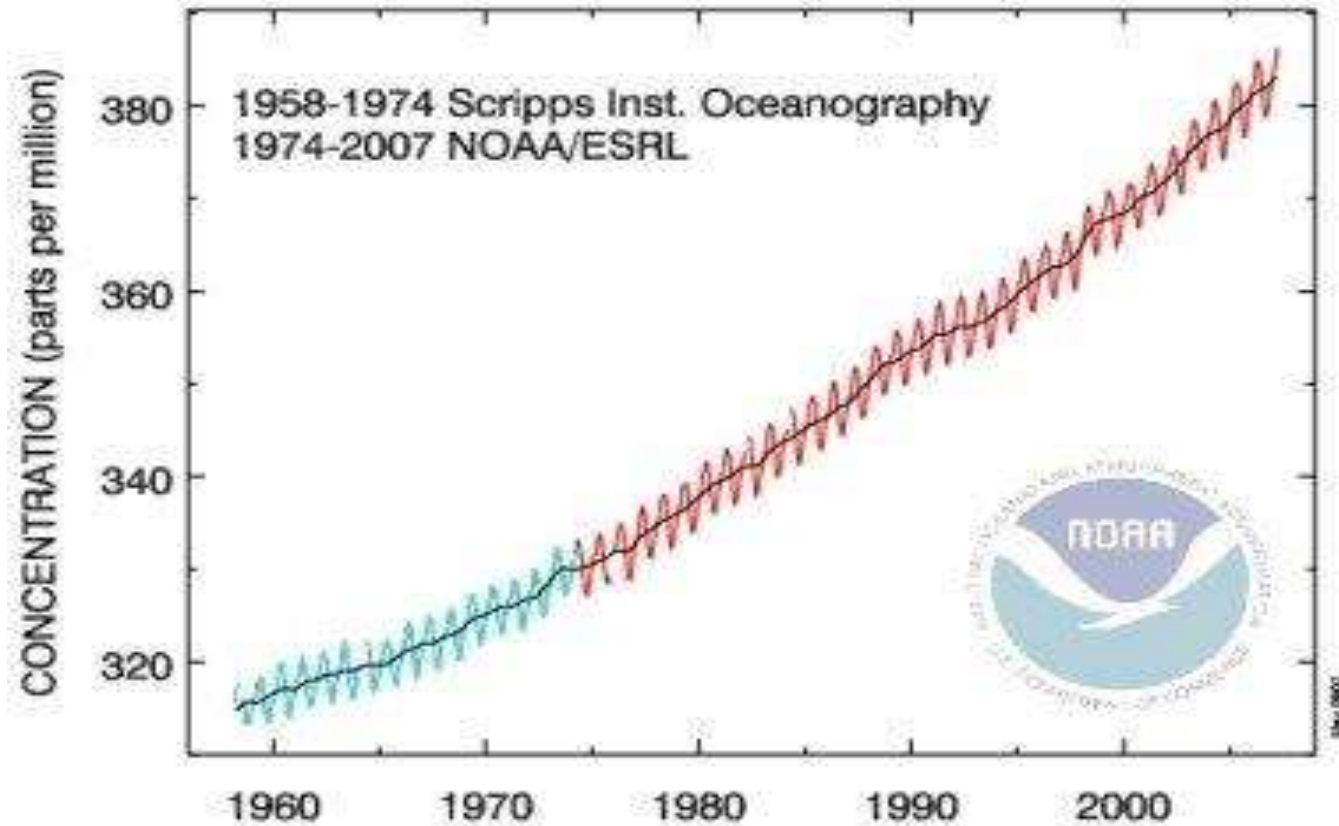
CO₂ Is Not a Pollutant



Beer Needs It

Flaw 4

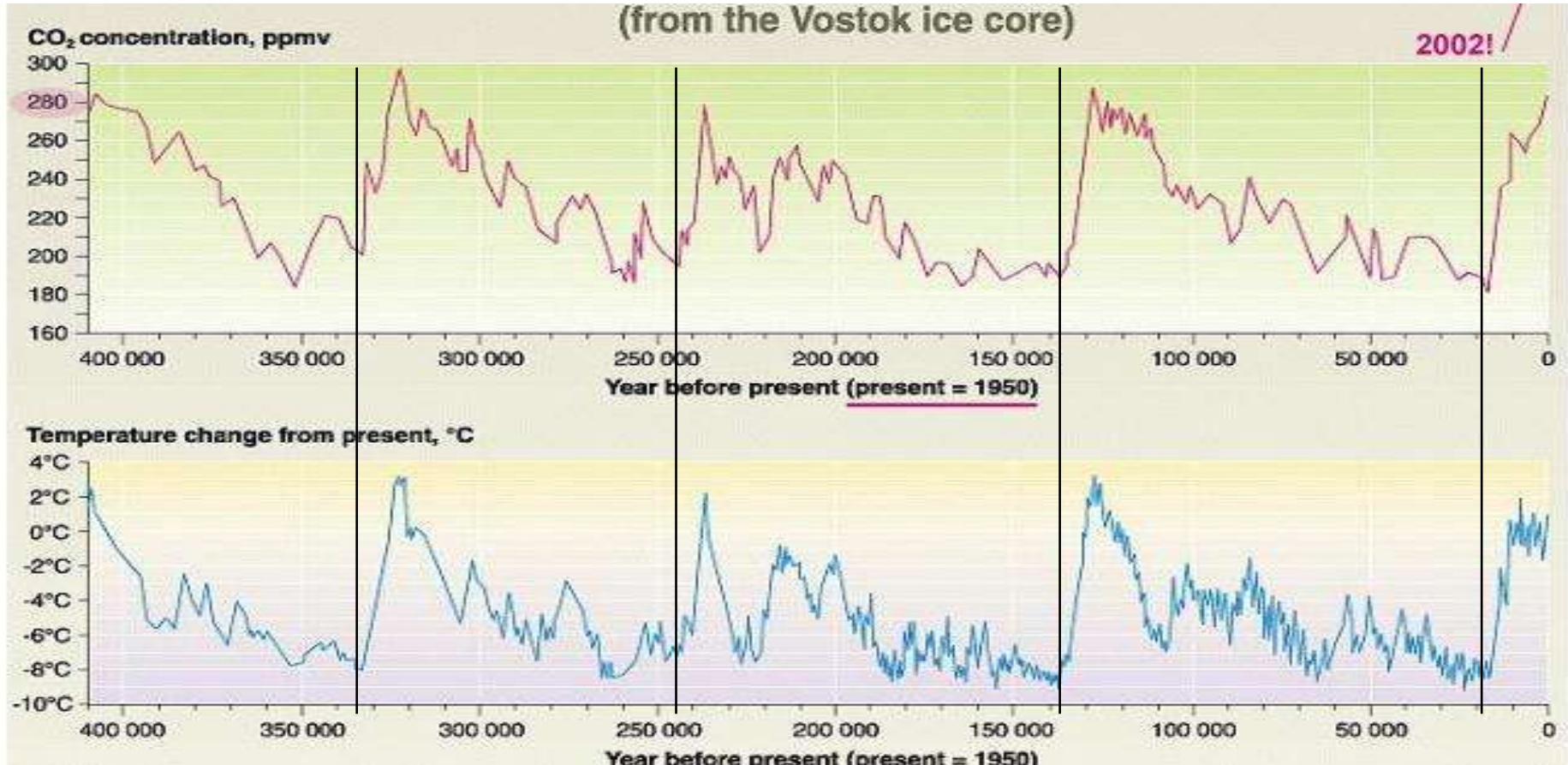
CO₂ levels are 380 ppm



**Assumption similar to 3600 American Expats
causing the Thai people
to attend baseball games and eat apple pie**

Fatal Flaw

Temperature Increase CAUSES CO₂ Increase



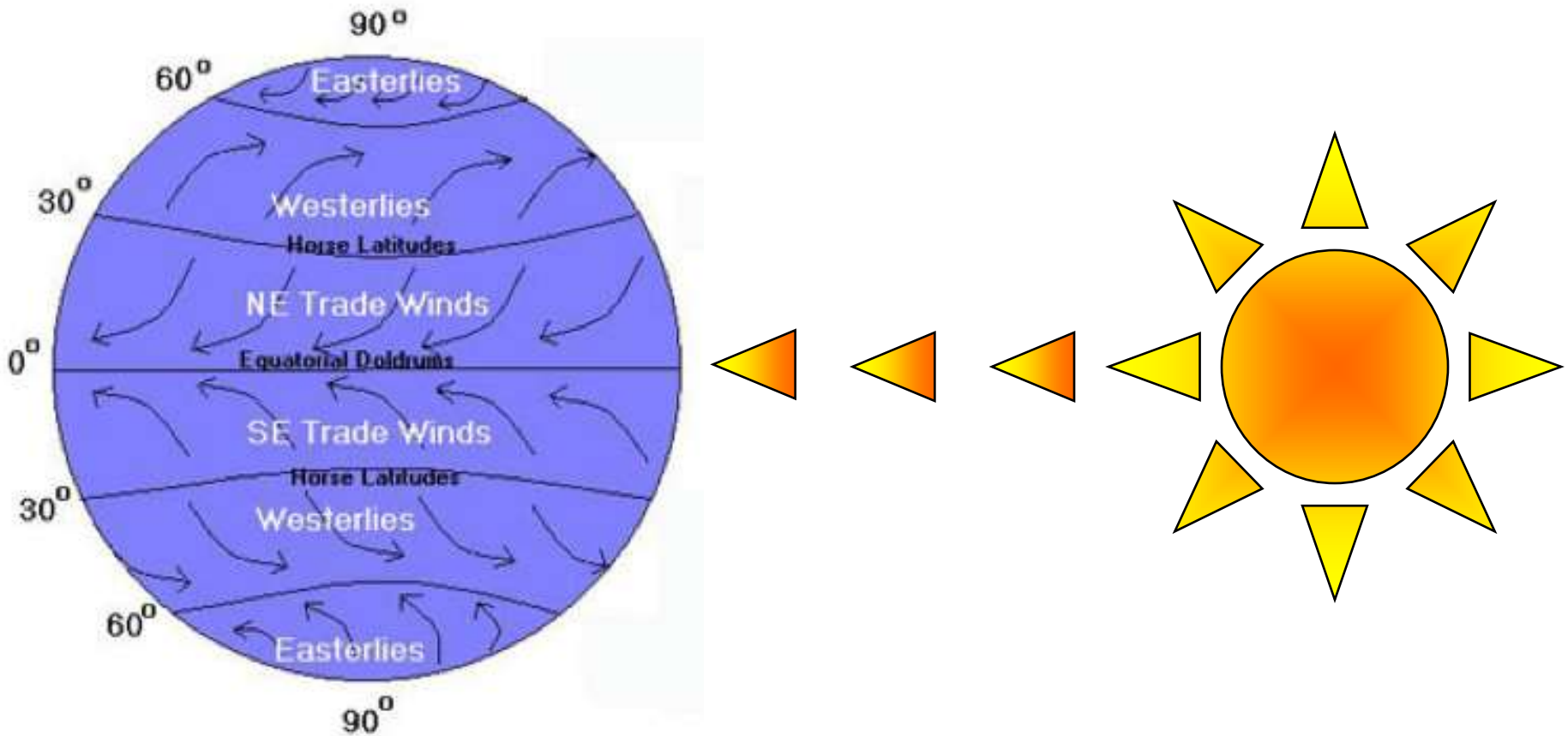
Therefore it can not be the cause of
Global Warming

A large, glowing orange and yellow sun with a smaller blue and white Earth in the background. The sun is the central focus, showing a textured surface with bright spots and darker areas. The Earth is visible in the upper right corner, appearing as a small blue and white sphere against the black background of space.

The Sun

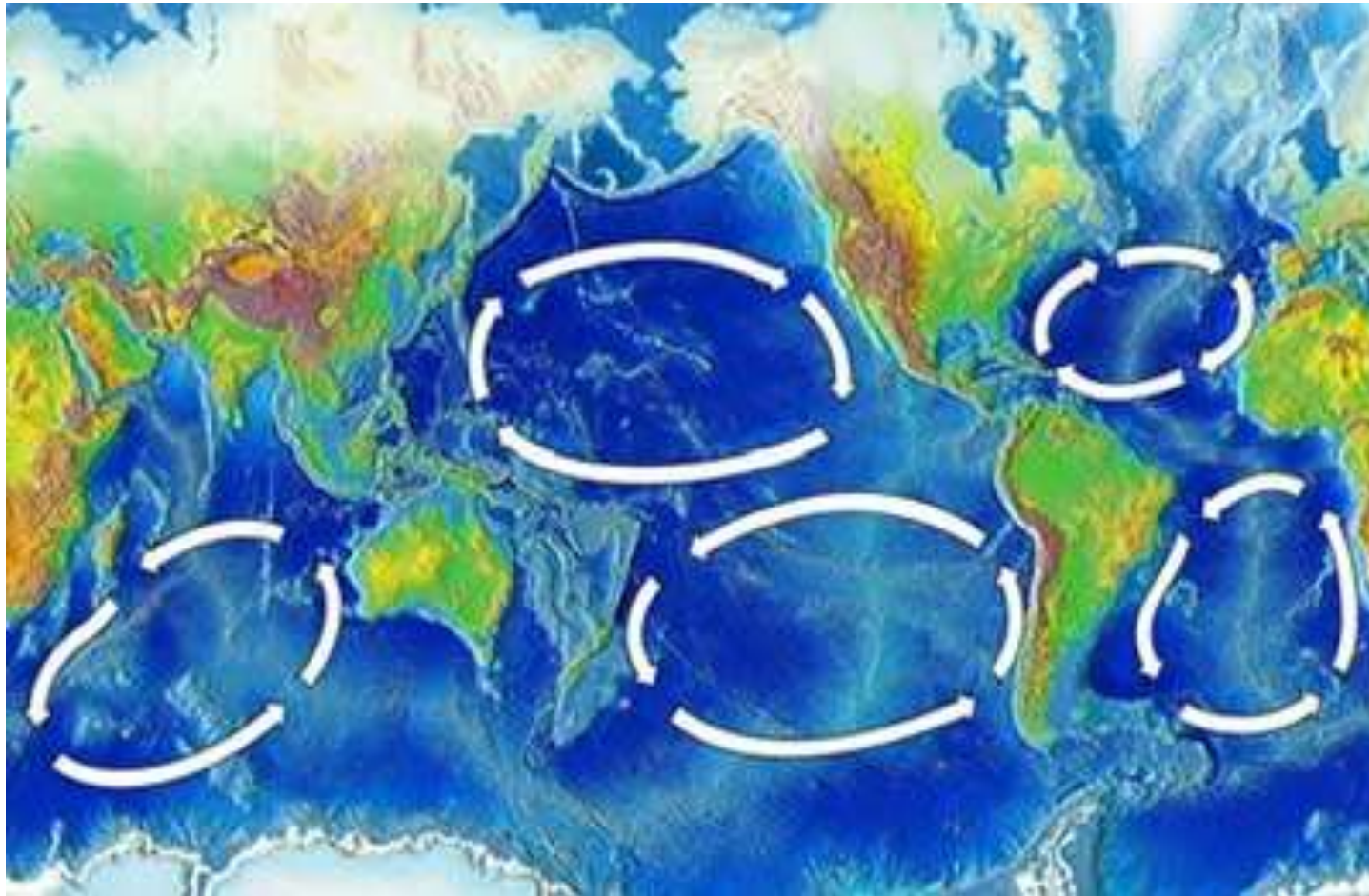
Earth's Wind System

Redistributes warm air from the tropics and cool air from the poles



Earth's Wind System

Creates 5 Major Ocean Current Systems



**Ocean currents play a major role in
Earth's heat transfer**

CO₂ Does not Cause Global Warming

Question Becomes

**Can the Atmospheric Concentration of
CO₂ become so great as to create a**

“Tipping Point”

**Such that CO₂ impacts Global
Temperatures?**

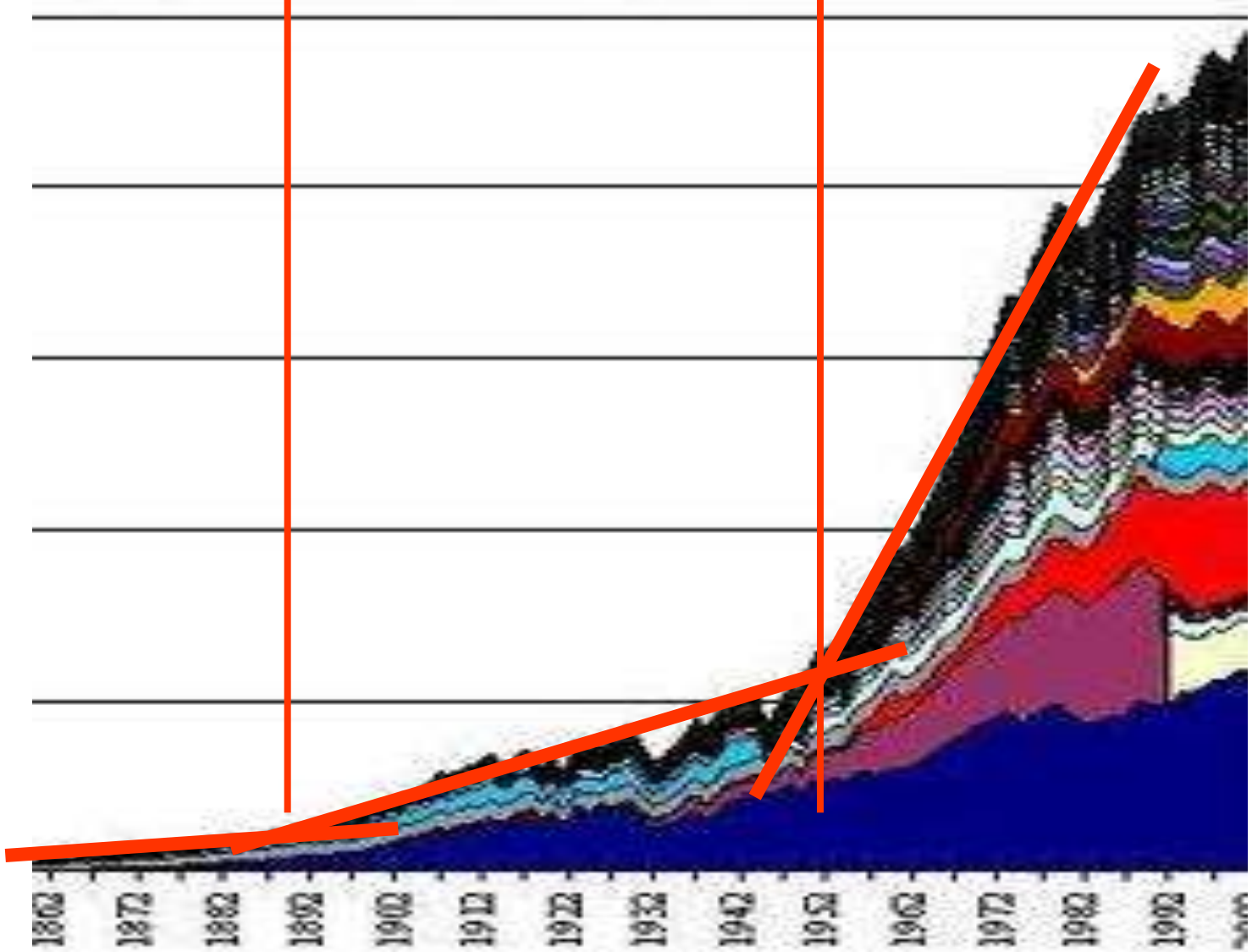
Absolutely

In Theory

But Does It?

**Slope Change
~1890**

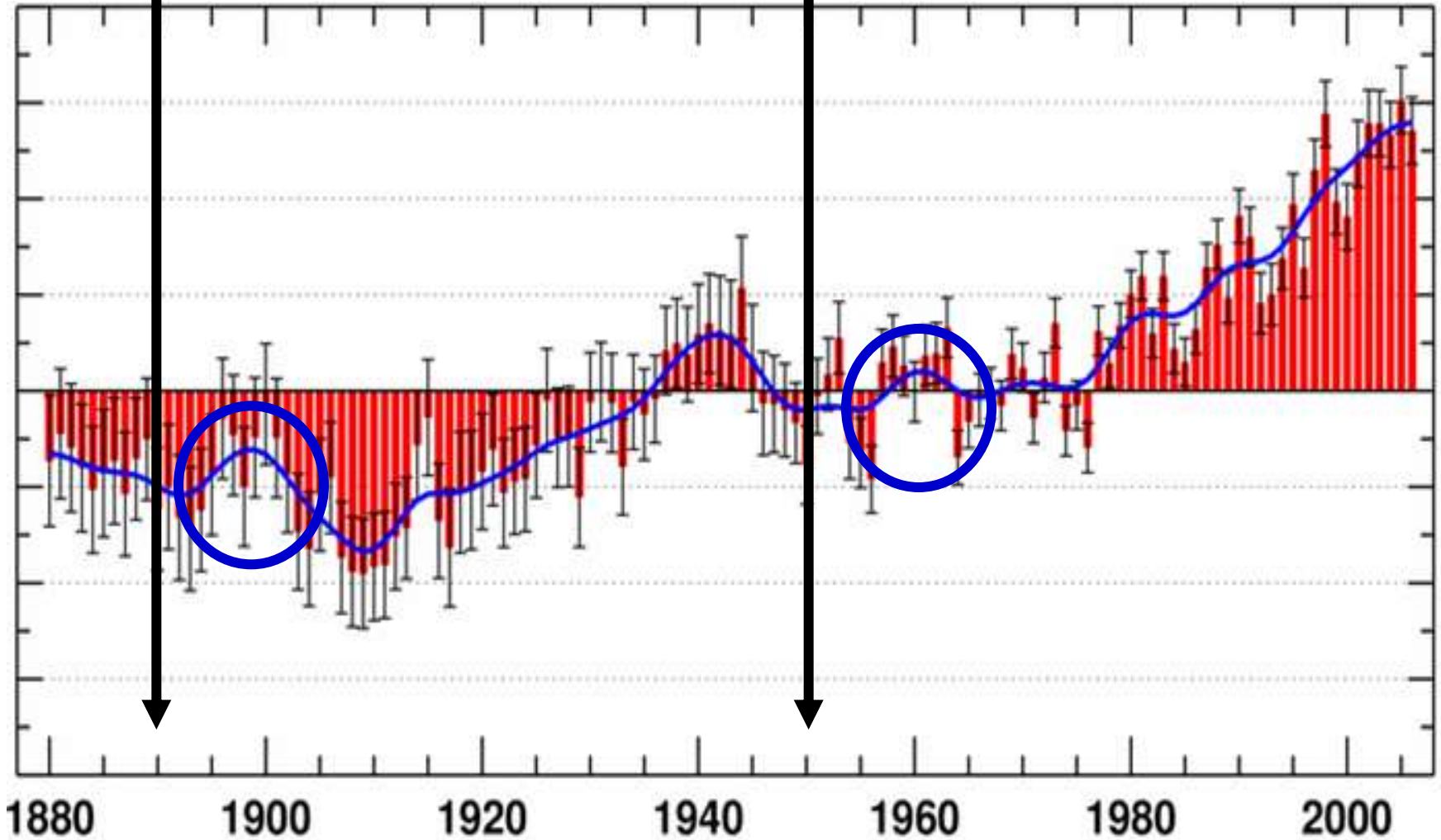
**Slope Change
~1950**



Global CO₂ Emissions from Fossil Fuel Burning

**Slope Change
~1890**

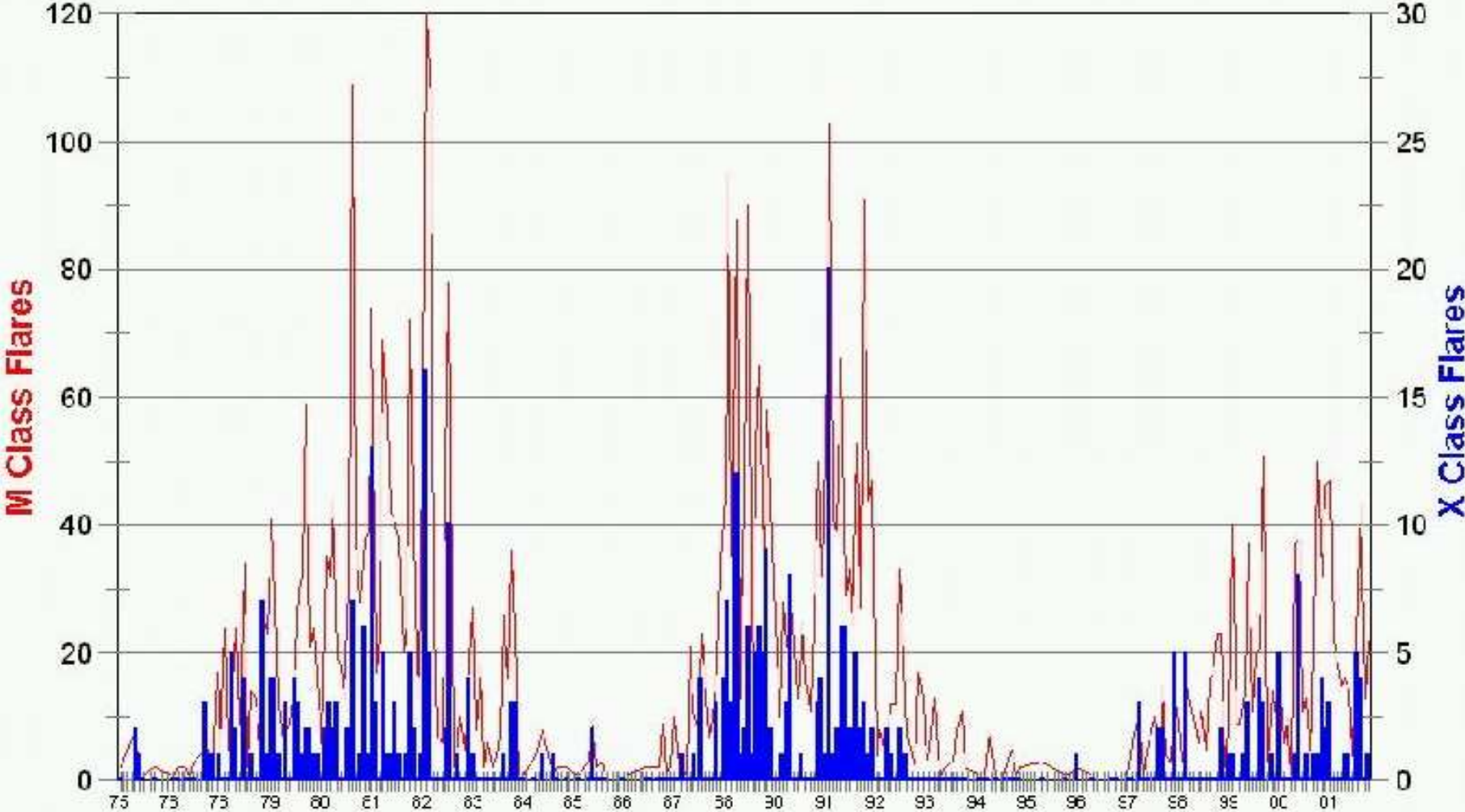
**Slope Change
~1950**



Possible CO₂ Affect

4 to 6 year lag between CO₂ and Temperature

Solar Activity

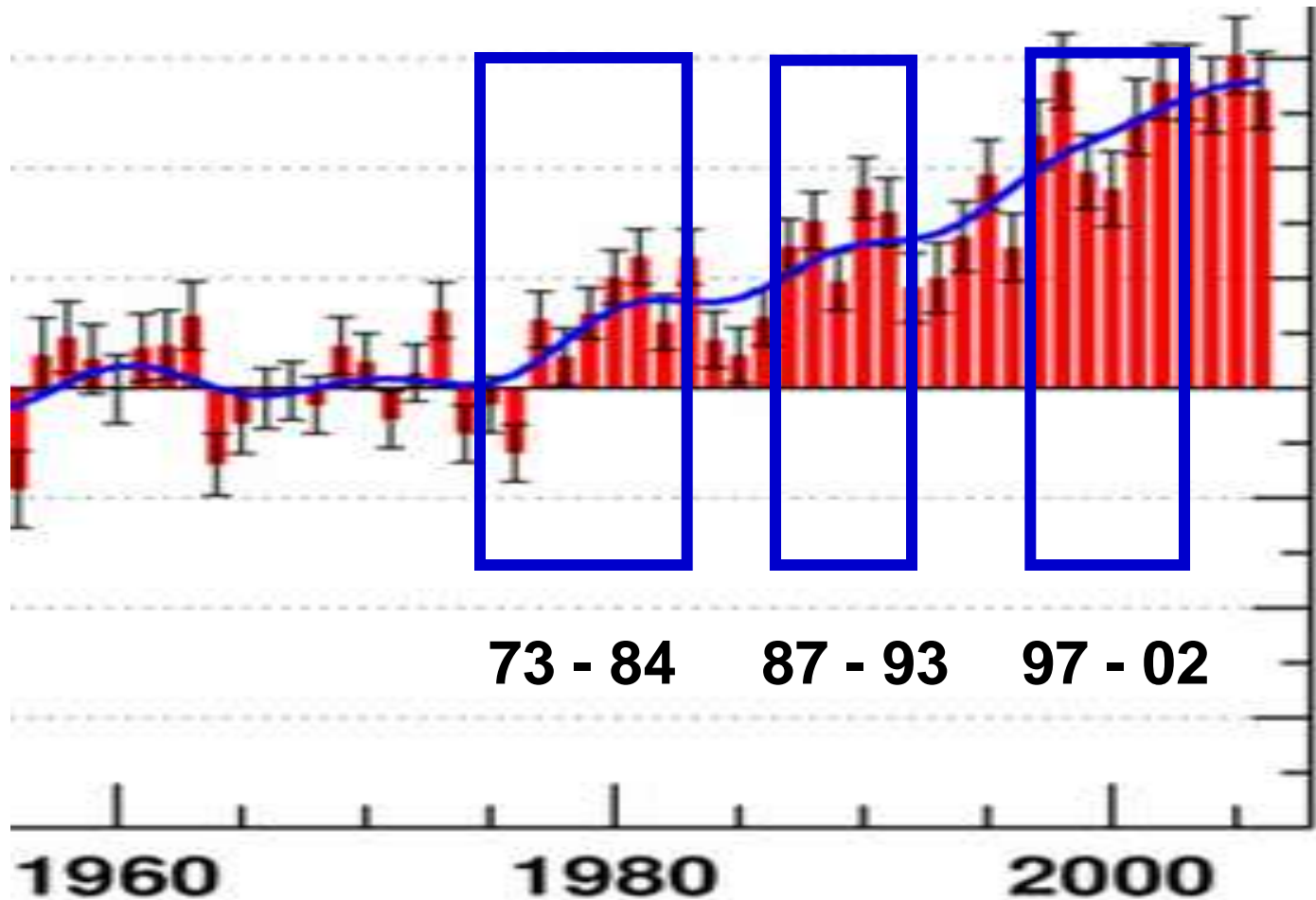


73 - 84

87 - 93

97 - 02

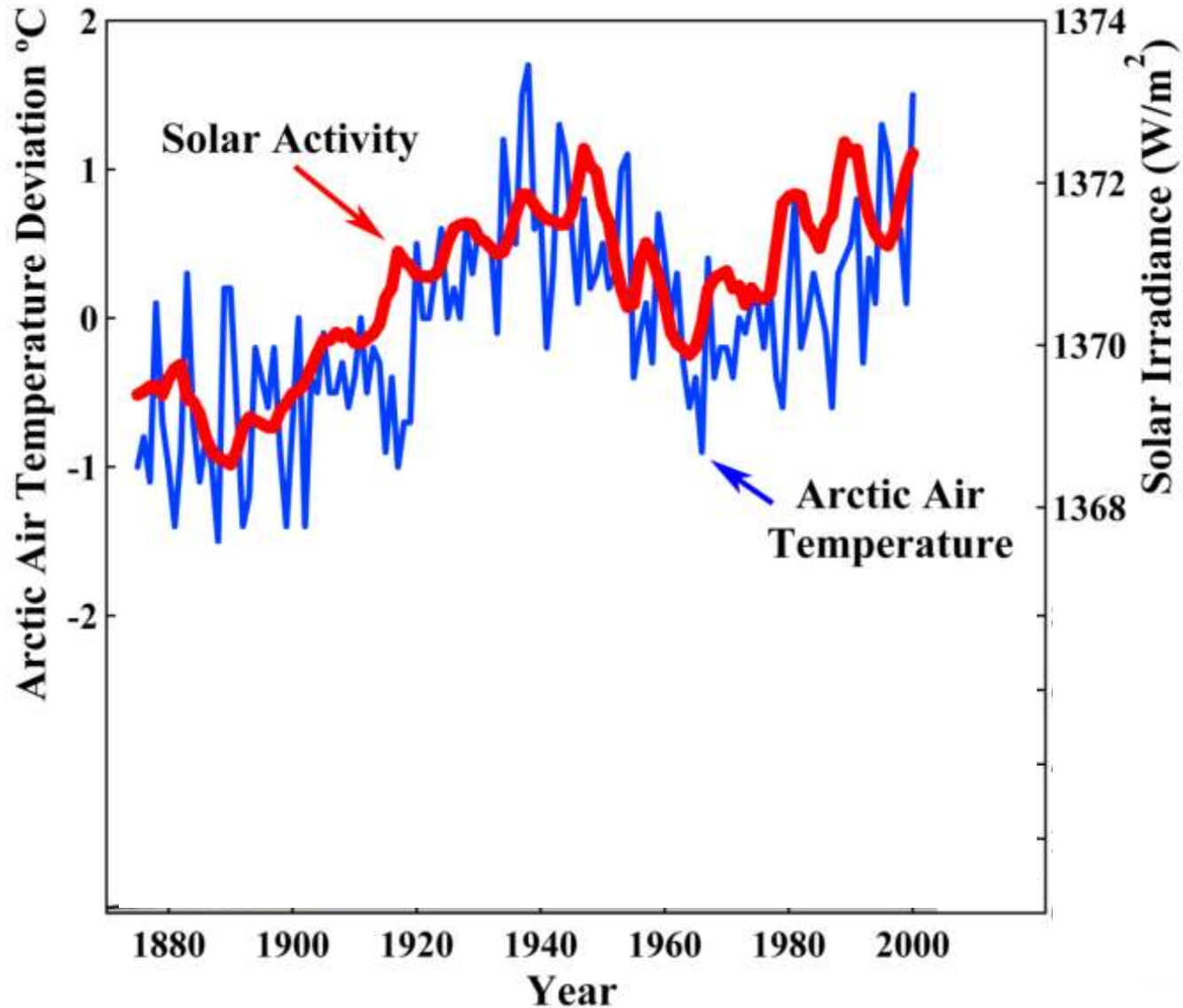
Solar Activity



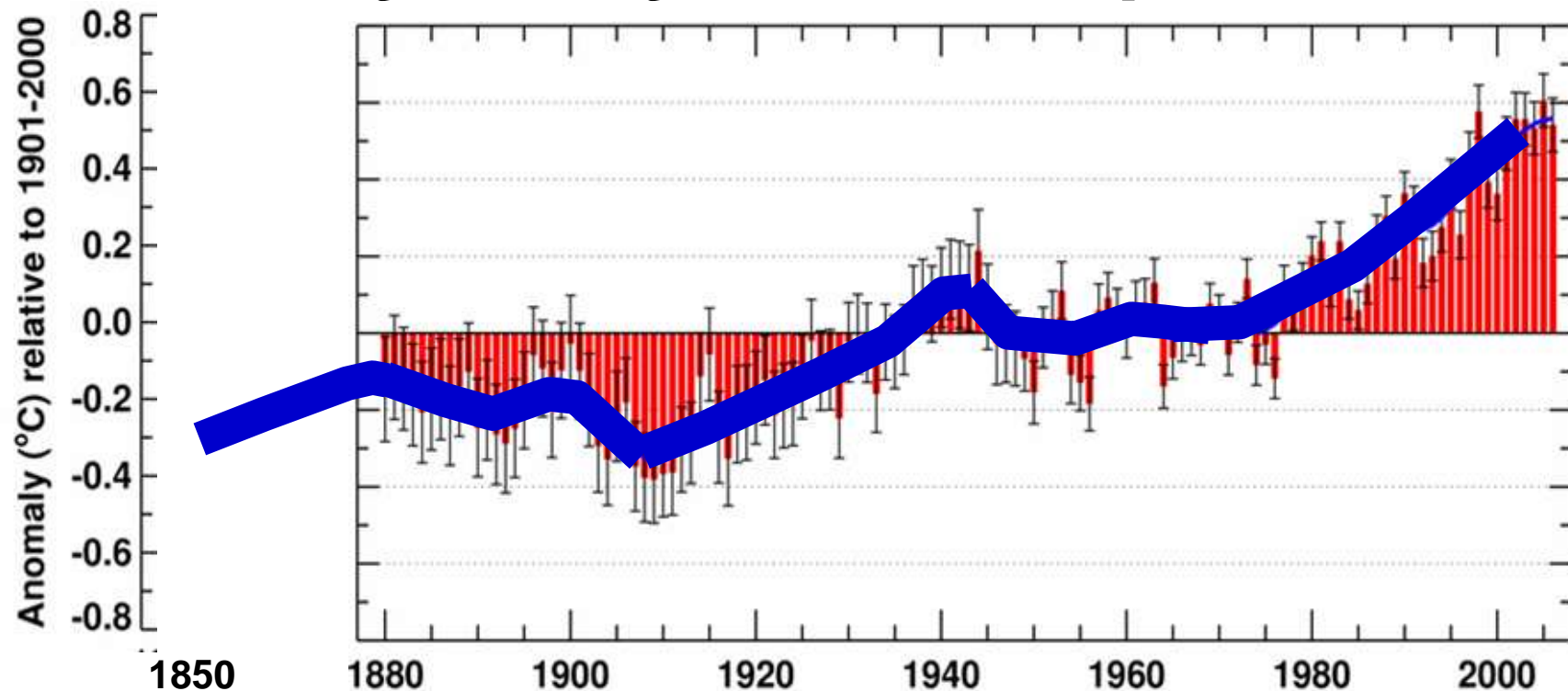
All periods of high solar activity show a corresponding Temperature Increase

Solar Activity Fits

Observed Temperature Fluctuations



The data shows a clear 20 - 30-year Cycle in Temperatures



1850 – 1880: Warming (End of Maunder Minimum)

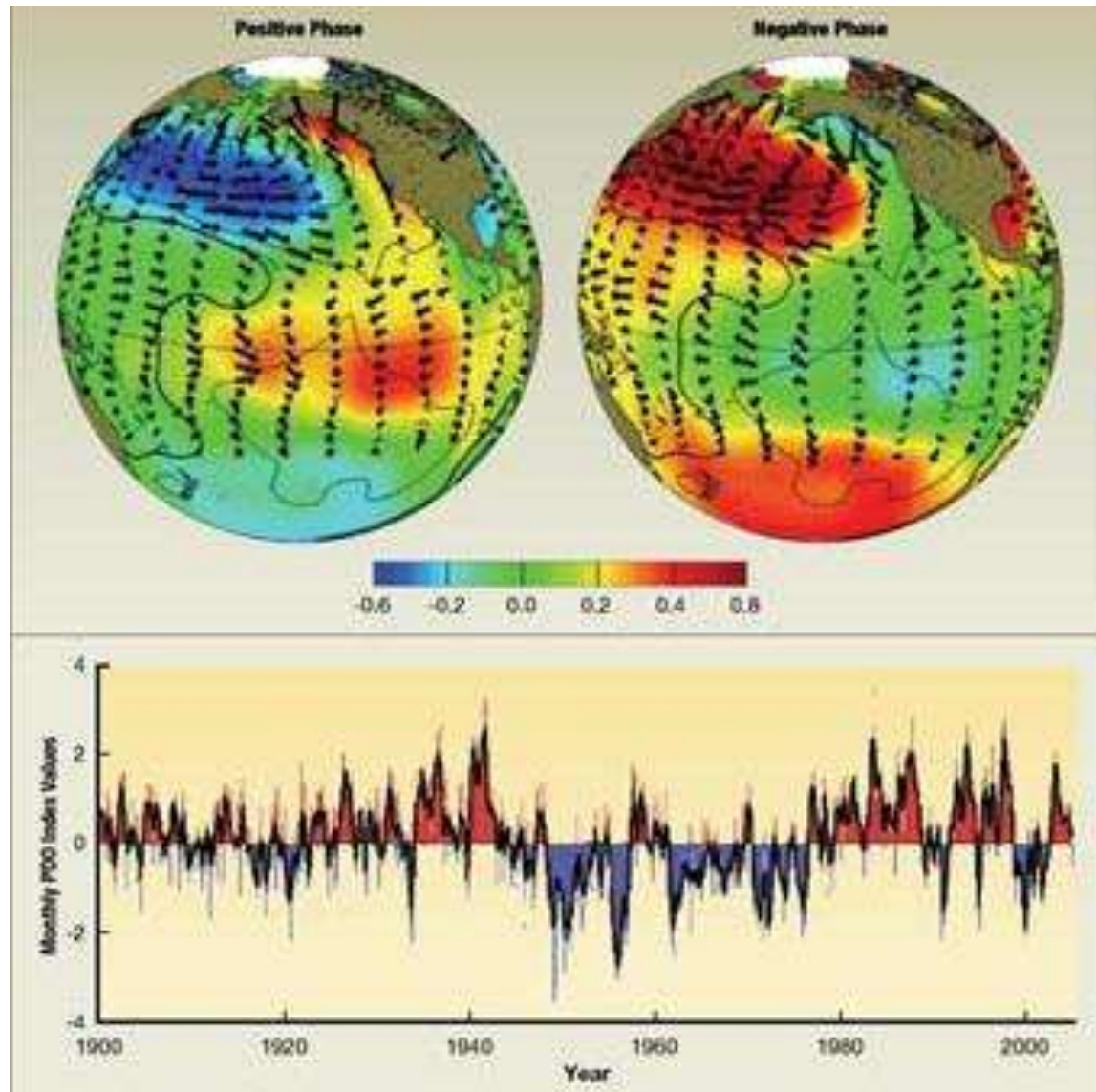
1880 – 1910: Cooling

1910 – 1940: Warming (Dust Bowl)

1940 – 1970: Cooling (The Eastern Front and 1970 Climate Crisis)

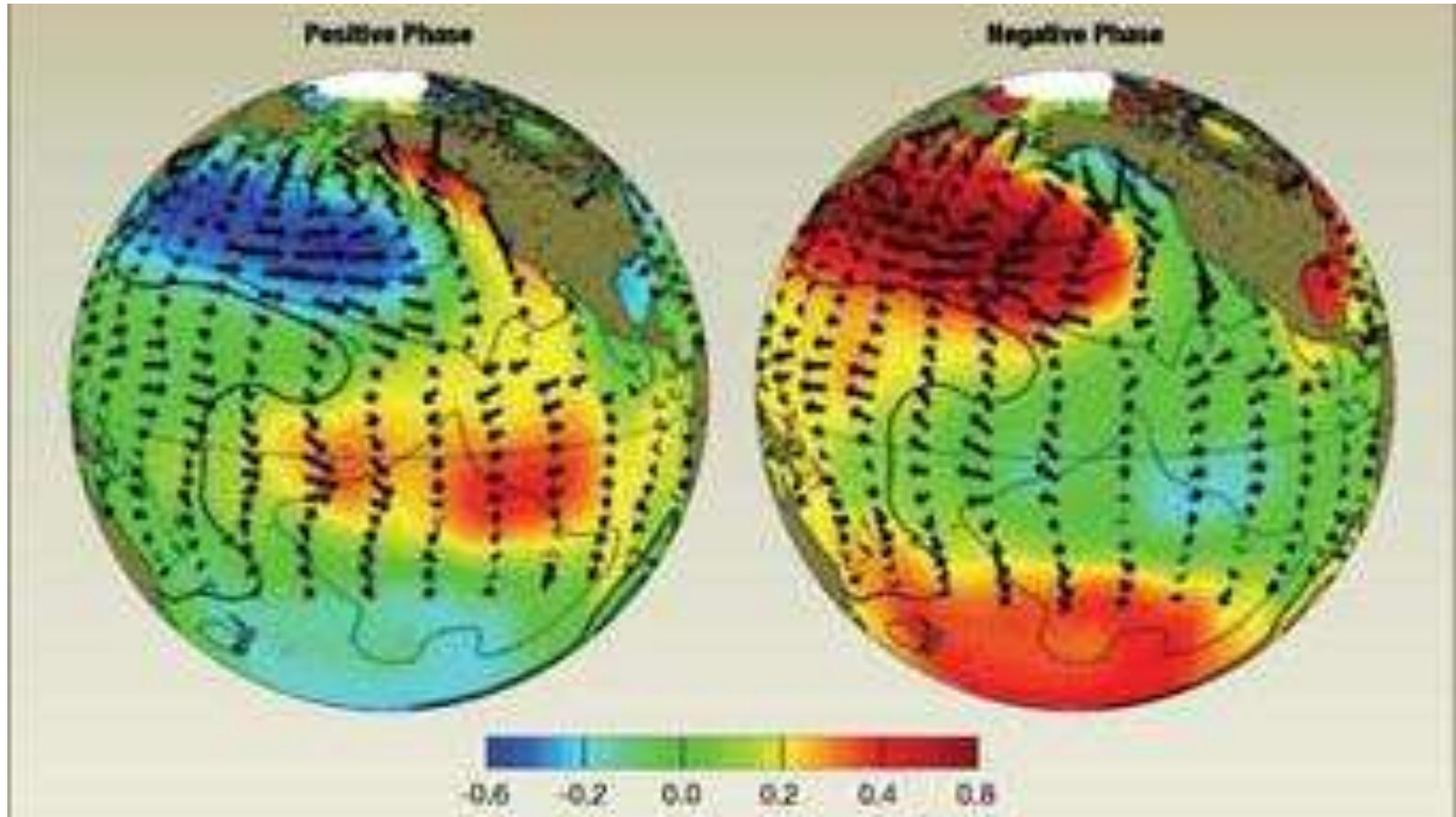
1970 – 2000: Warming (The Current Climate Crisis)

Cause of 20 - 30-year Cycles



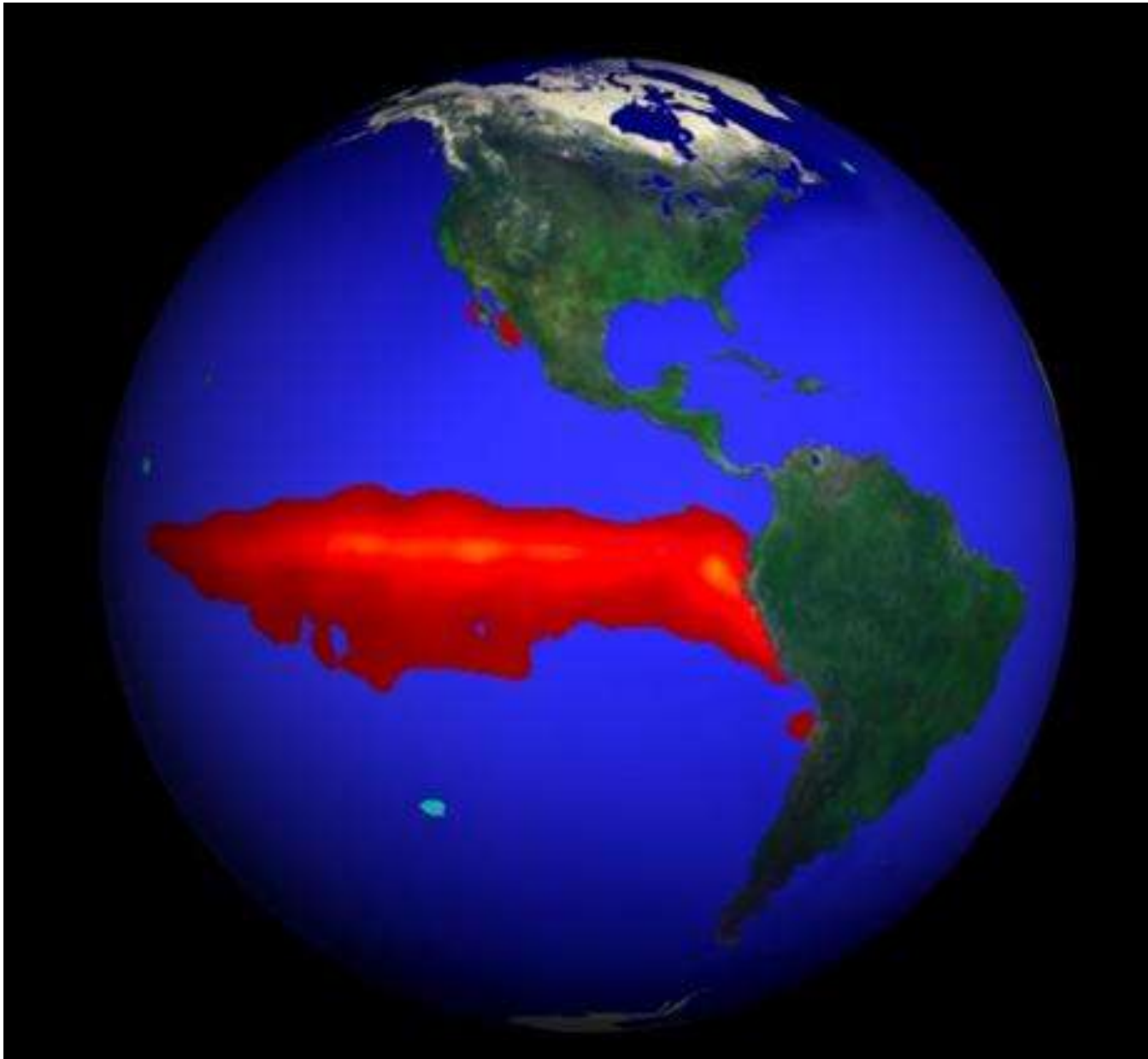
Pacific Decadal Oscillation

Changes in Oceanic Circulation Plays Havoc with Climate



PDO influences El Nino Southern Oscillation (ENSO)

ENSO affects global climate



Oceanic Circulation and Climate Change

Nile Shrank



Sahara Expanded



Civilization Collapsed



Major drought in North Africa / Middle East

Temperature Data Reflect

Strong Control by Solar Activity

Strong Affect by Oceanic Currents

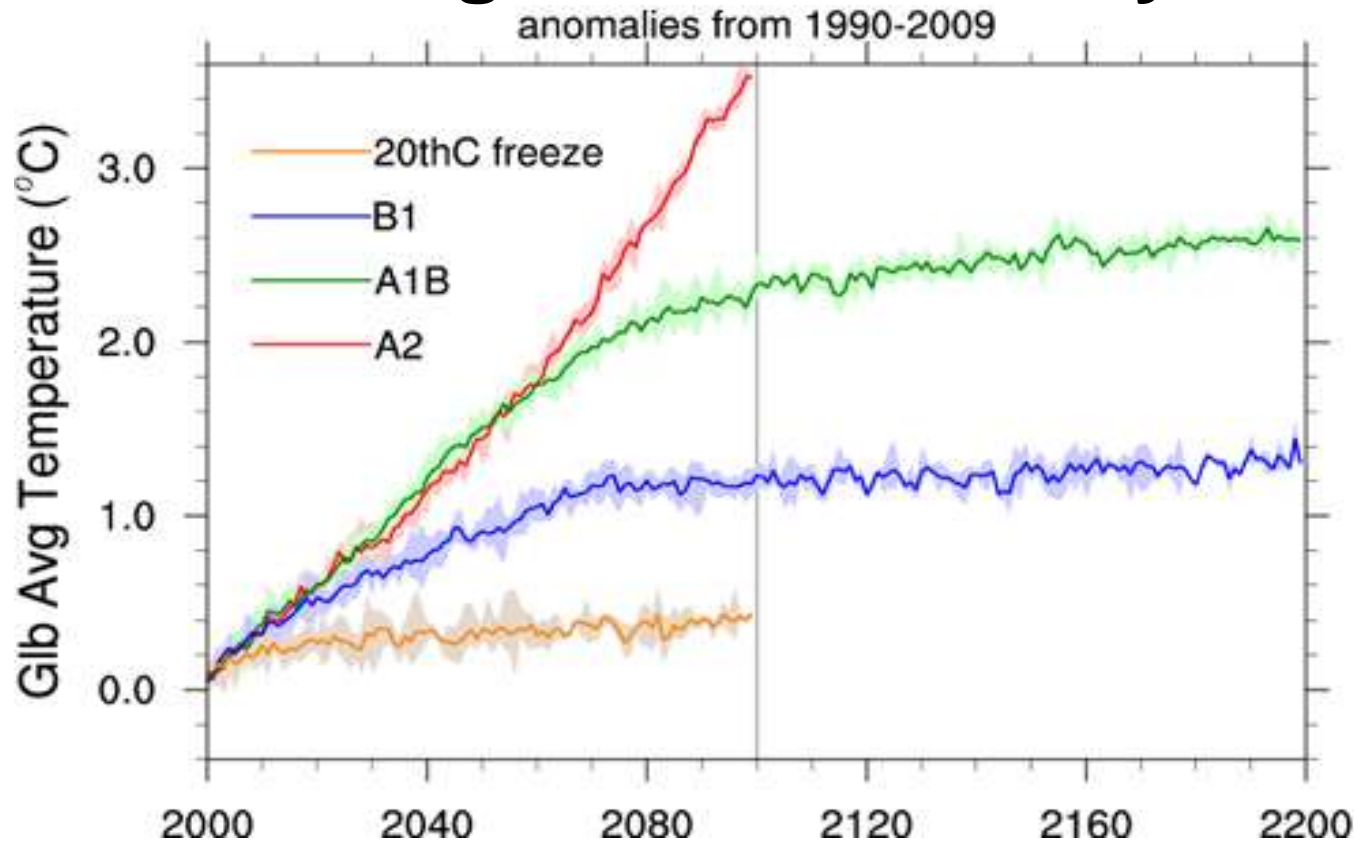
Possible Weak Affect by CO₂

Question 3

**What Will
Global Temperatures Do?**

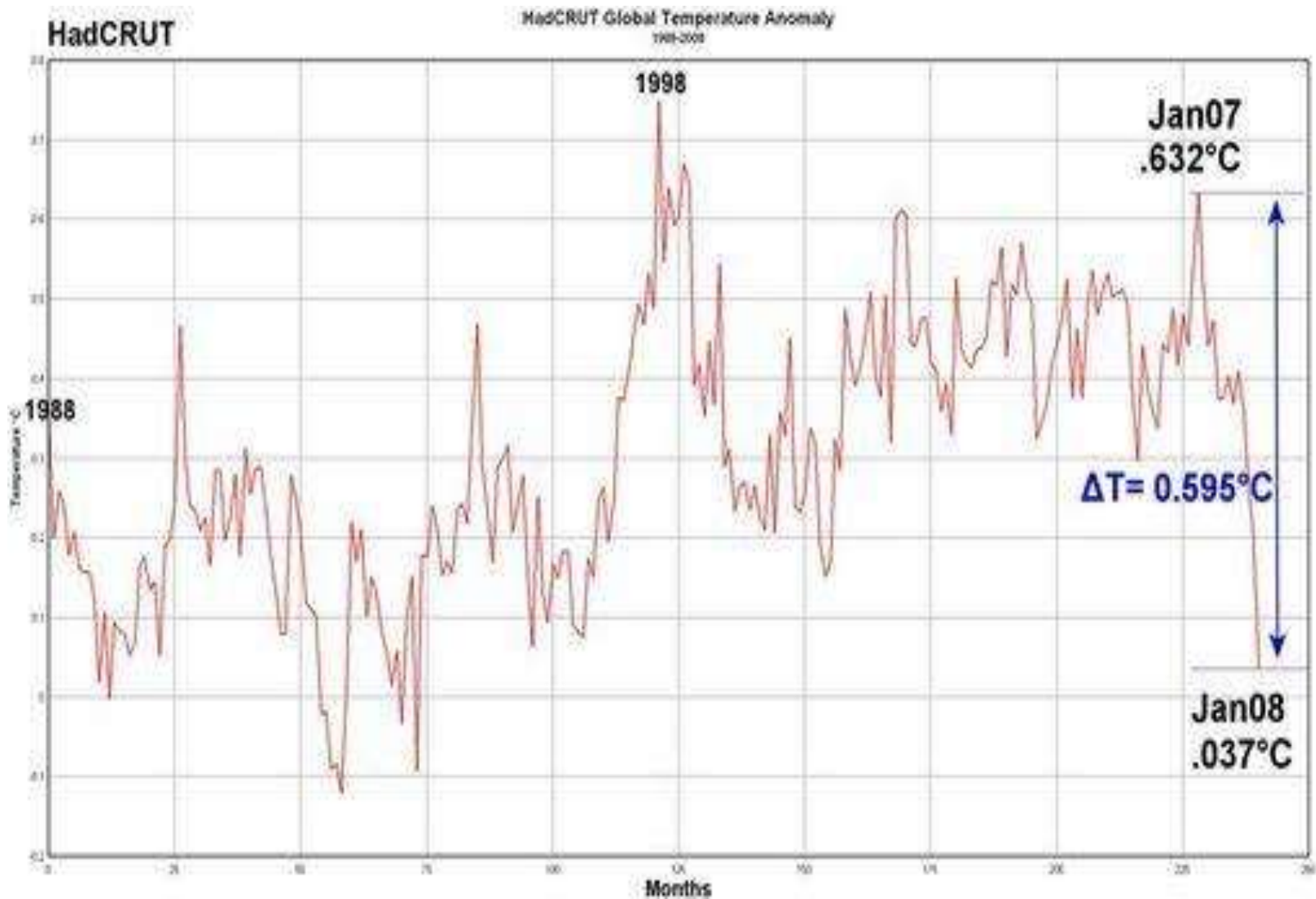
IPCC Claims

World temperatures could rise by between 1.1 and 6.4 °C (2.0 and 11.5 °F) during the 21st century

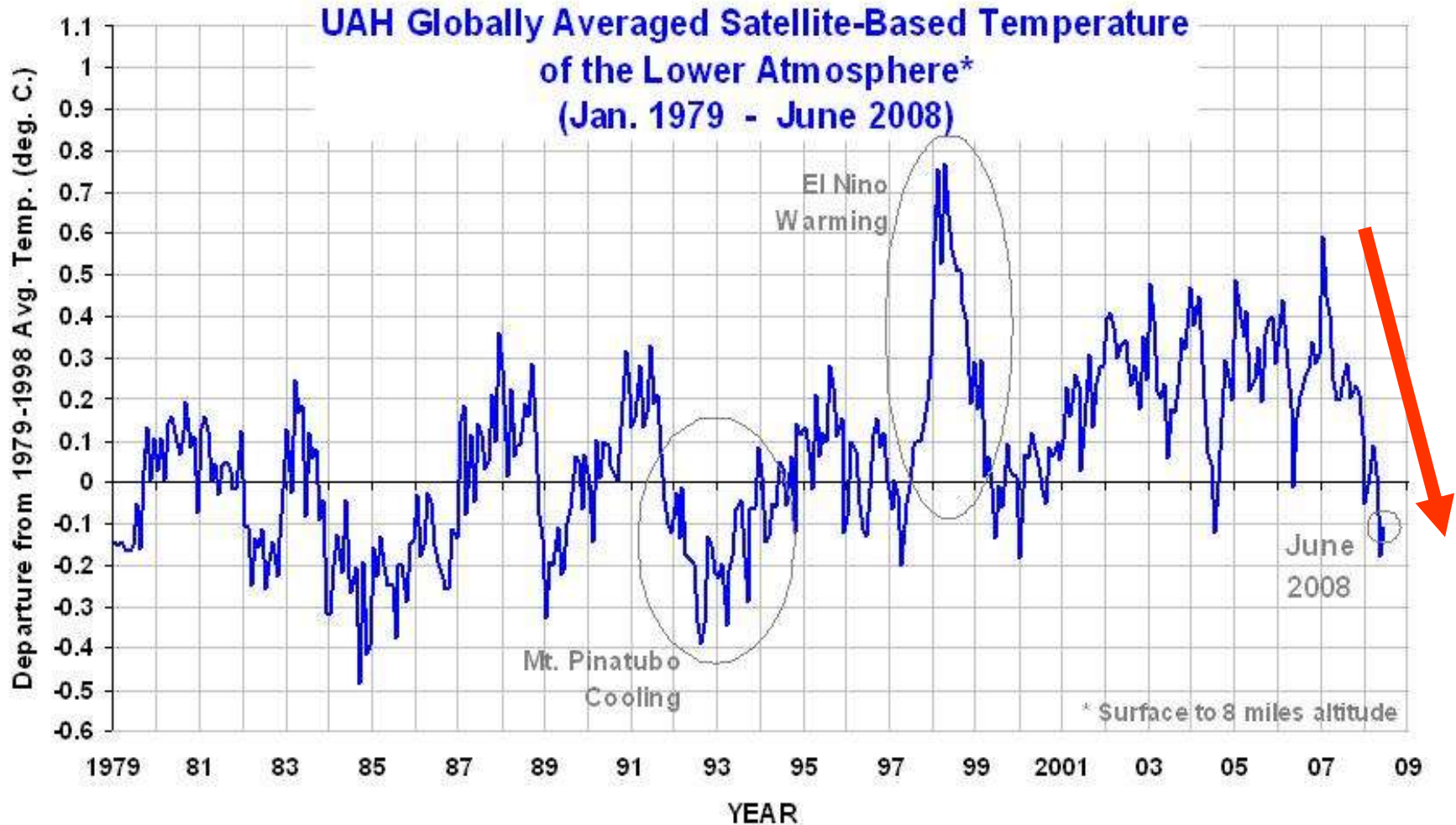


IPCC Prediction is model-based. Several (many?) of the assumptions in the current model are wrong

Over the last Decade Temperatures Have Been Leveling Out

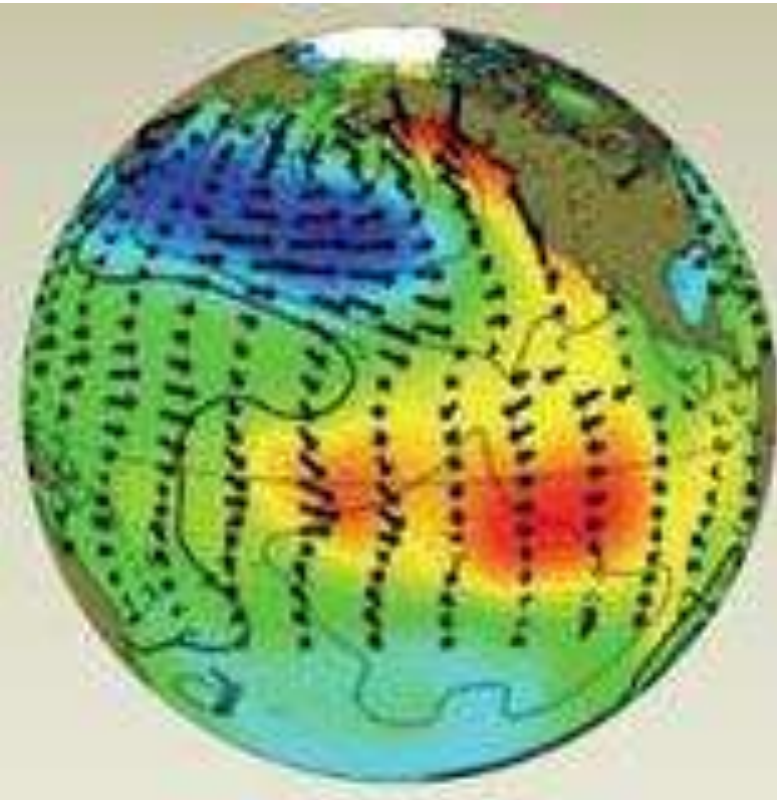


Most Recent Satellite Data Show Temperatures Cooling



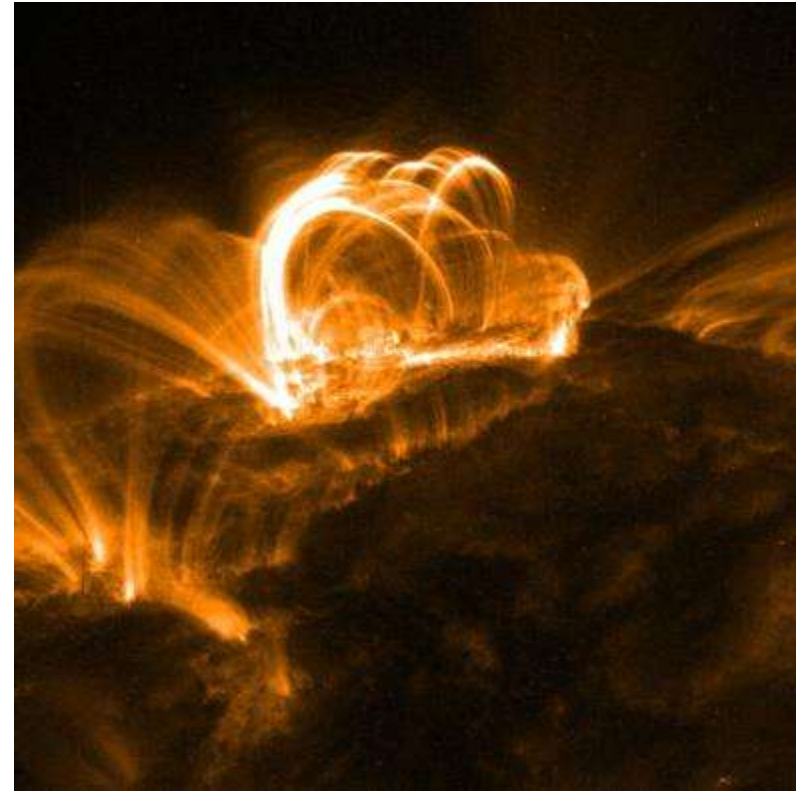
So What Will They Do?

We Do Not Know, But:



**PDO has shifted
to Cool Phase**

&



**Solar Flare activity
is at very low levels**

Both together suggest a prolonged Period of Cooling



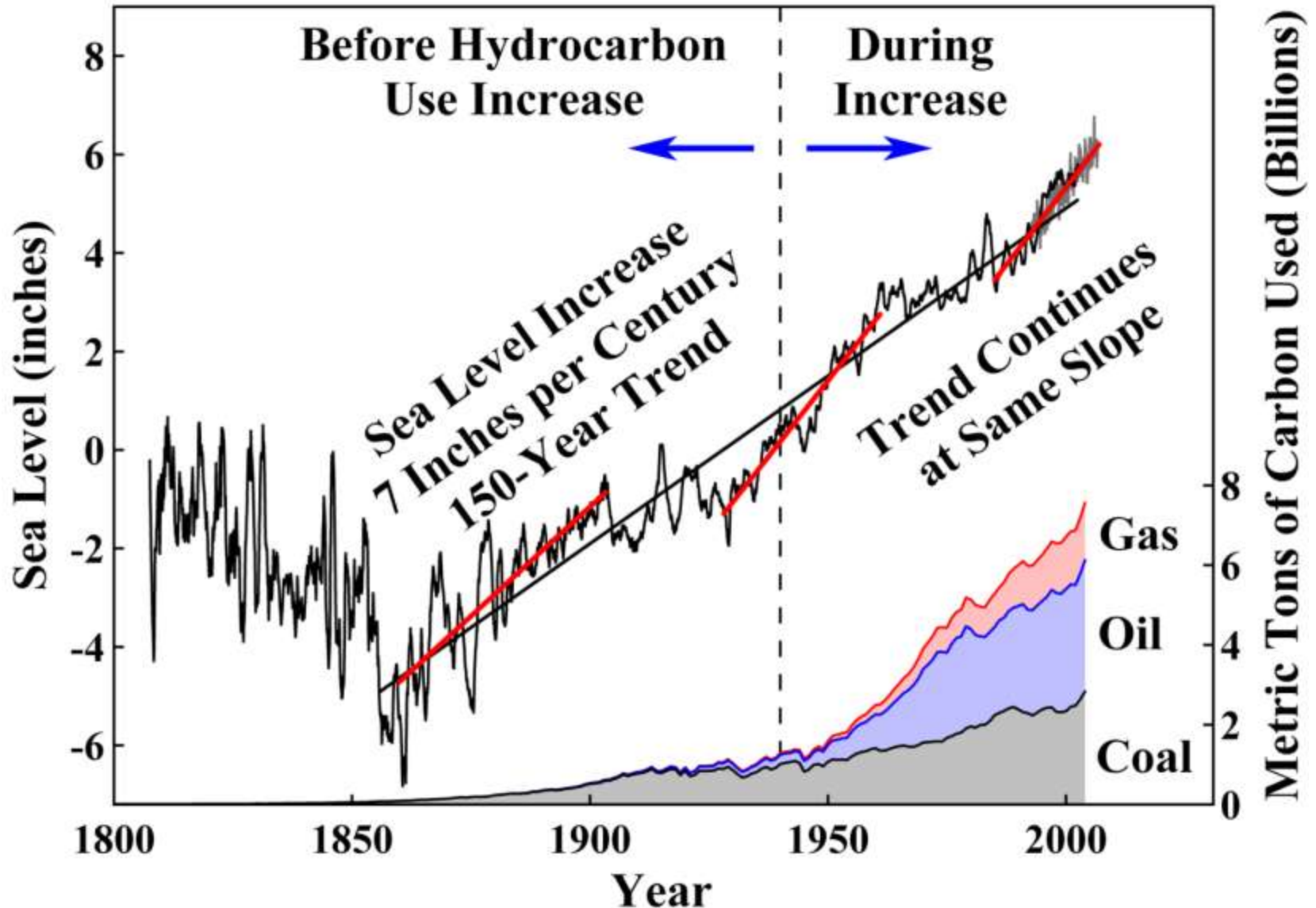
Question 4

**What Are
The Consequences of
Climate Change**

The Consequences of Global Warming

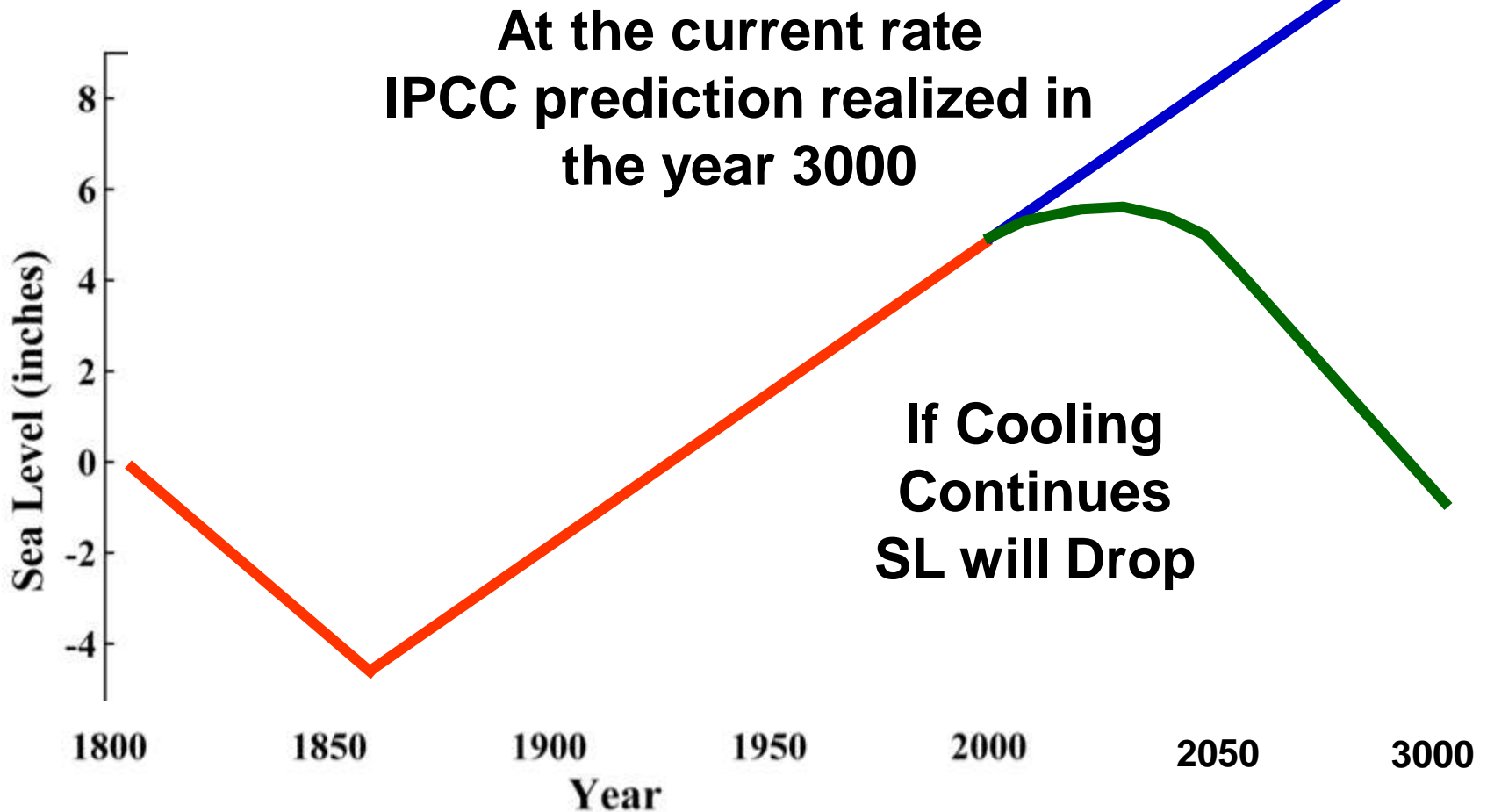
- 1) Sea levels will probably rise by 18 to 59 cm (7.08 to 23.22 in)**
- 2) There is a confidence level >90% that there will be more frequent warm spells, heat waves and heavy rainfall**
- 3) There is a confidence level >66% that there will be an increase in droughts, tropical cyclones and extreme high tides**

Sea-Level Increases are following the 150 year trend



Sea-Level has been rising 0.07 inches per year

7 inch Increase

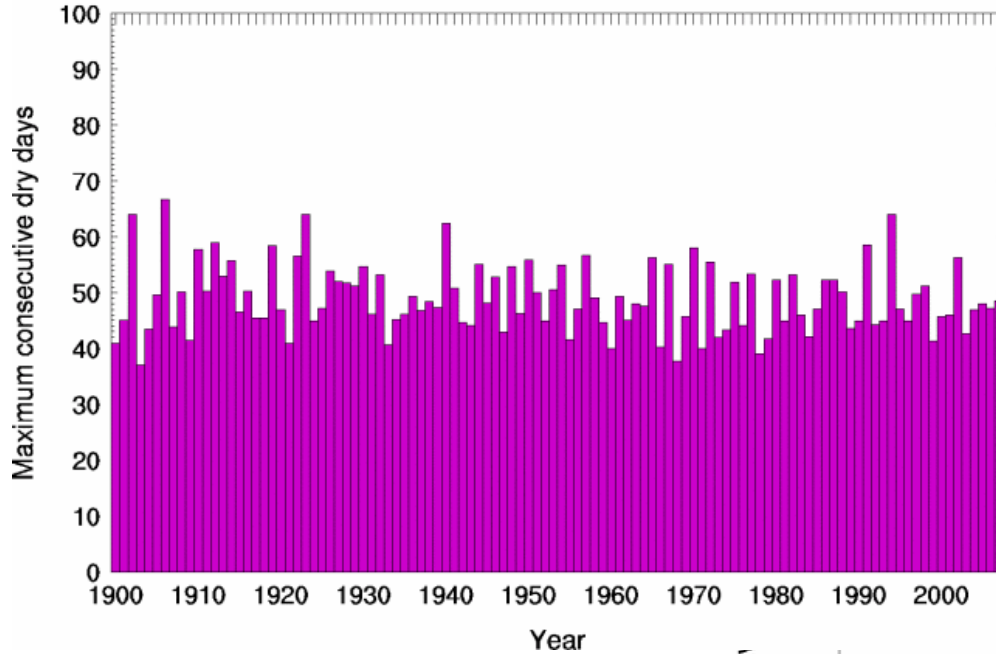


The Consequences of Global Warming

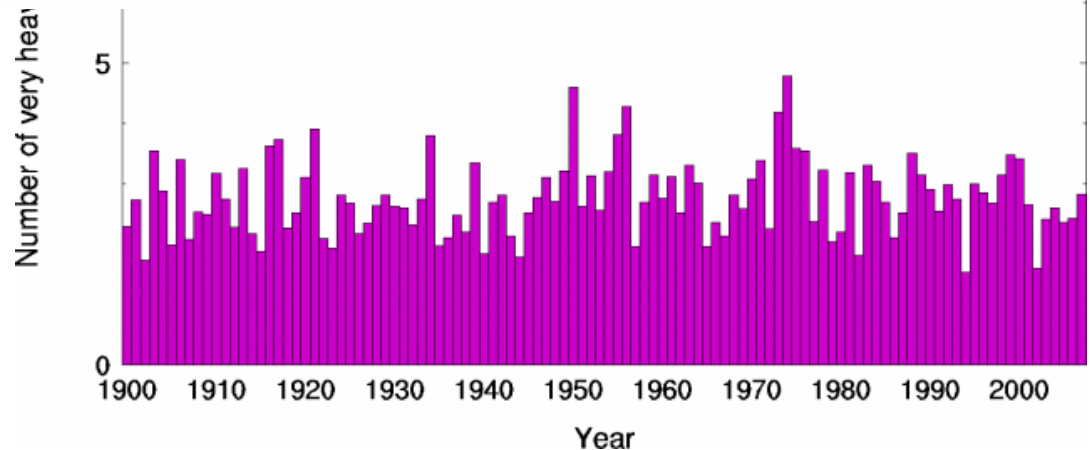
- 1) **Sea levels will probably rise by 18 to 59 cm (7.08 to 23.22 in)**
- 2) **There is a confidence level >90% that there will be more frequent warm spells, heat waves and heavy rainfall**
- 3) **There is a confidence level >66% that there will be an increase in droughts, tropical cyclones and extreme high tides**

There has been no increase in the number of dry spells and heavy rainstorms

Average consecutive dry days



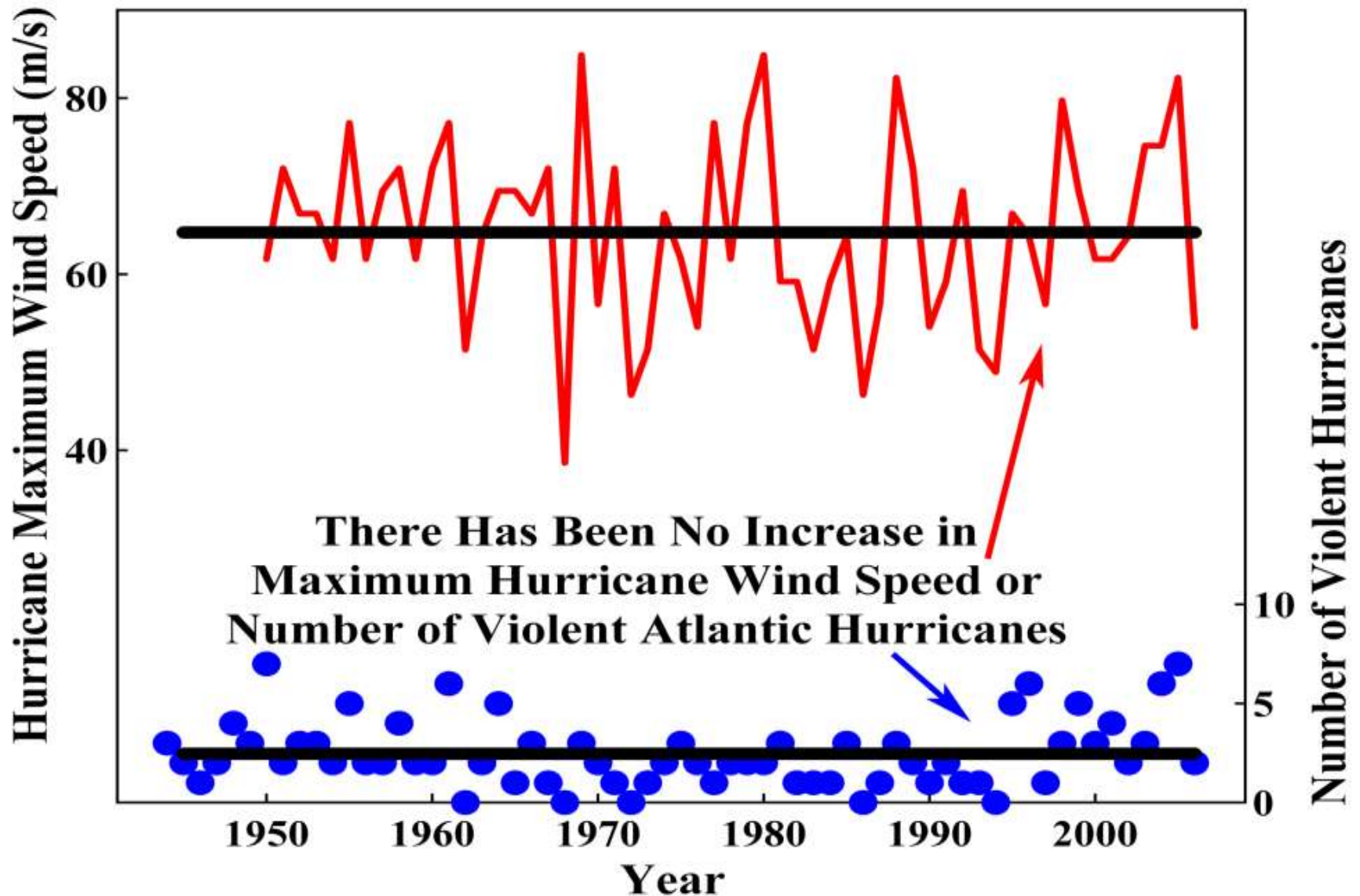
Average number of very heavy rain days



The Consequences of Global Warming

- 1) Sea levels will probably rise by 18 to 59 cm (7.08 to 23.22 in)**
- 2) There is a confidence level >90% that there will be more frequent warm spells, heat waves and heavy rainfall**
- 3) There is a confidence level >66% that there will be an increase in droughts, tropical cyclones and extreme high tides**

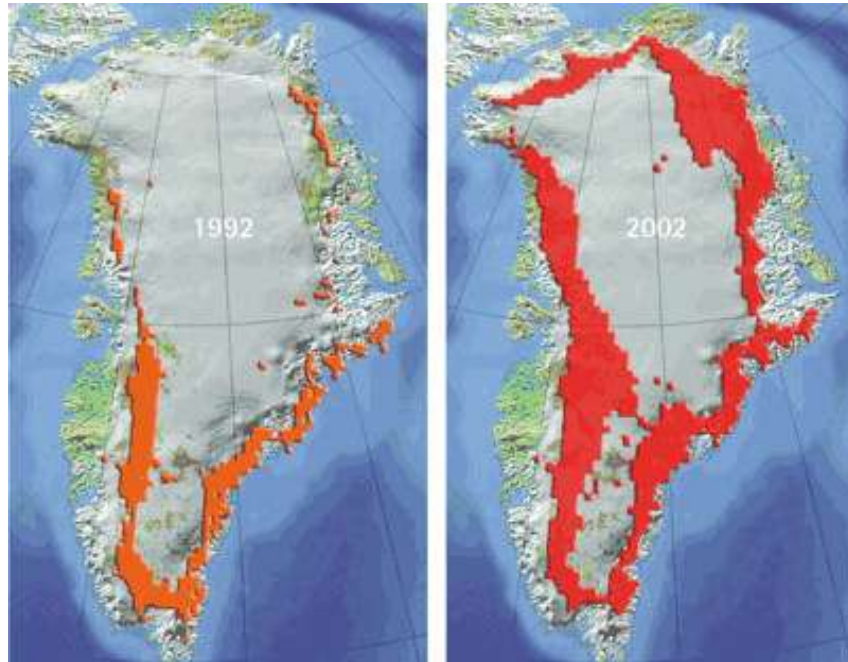
There has been no increase in the number or the severity of cyclonic storms



Headlines

Greenland Glaciers Disappearing

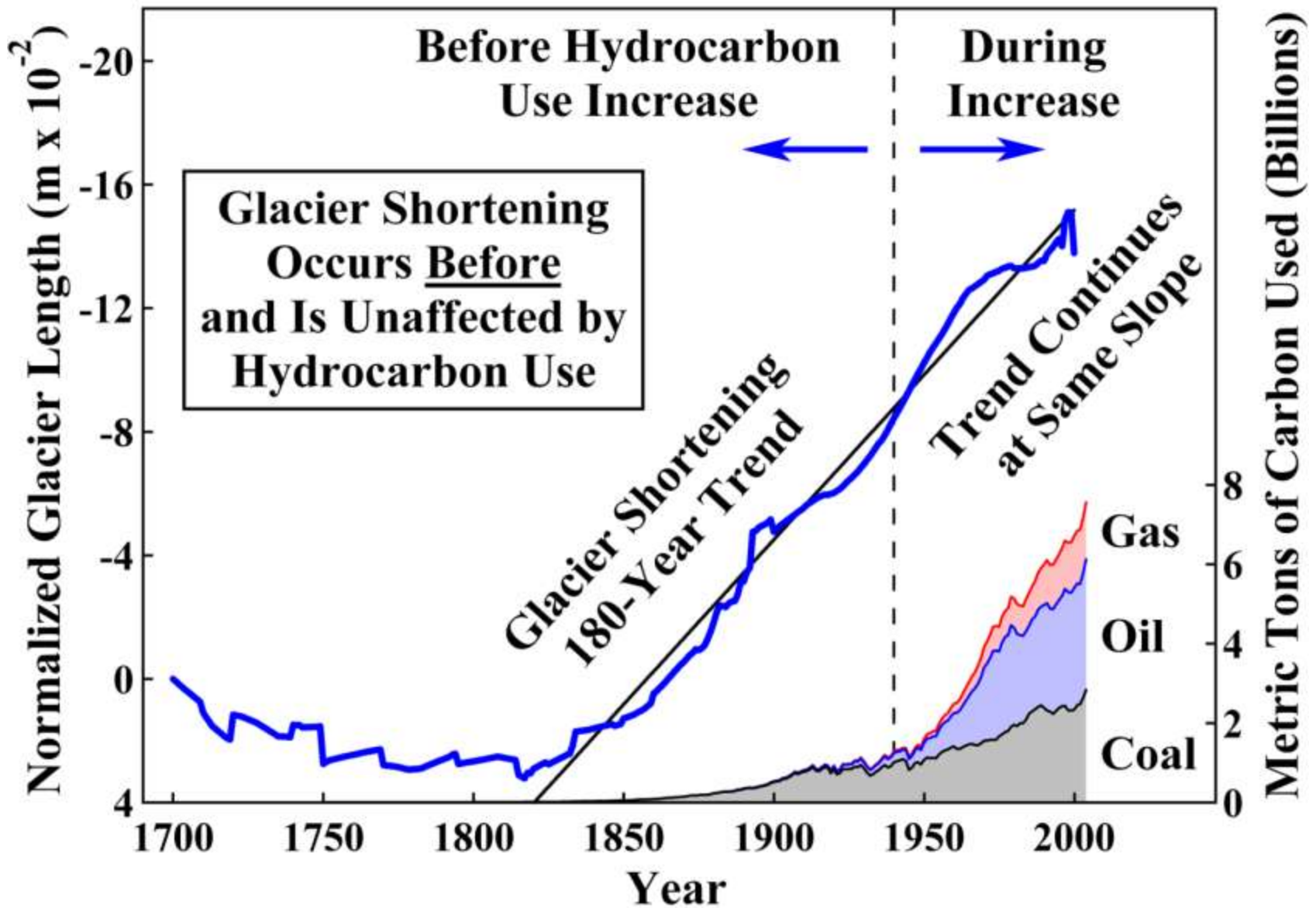
Greenland Glaciers Retreating at record pace



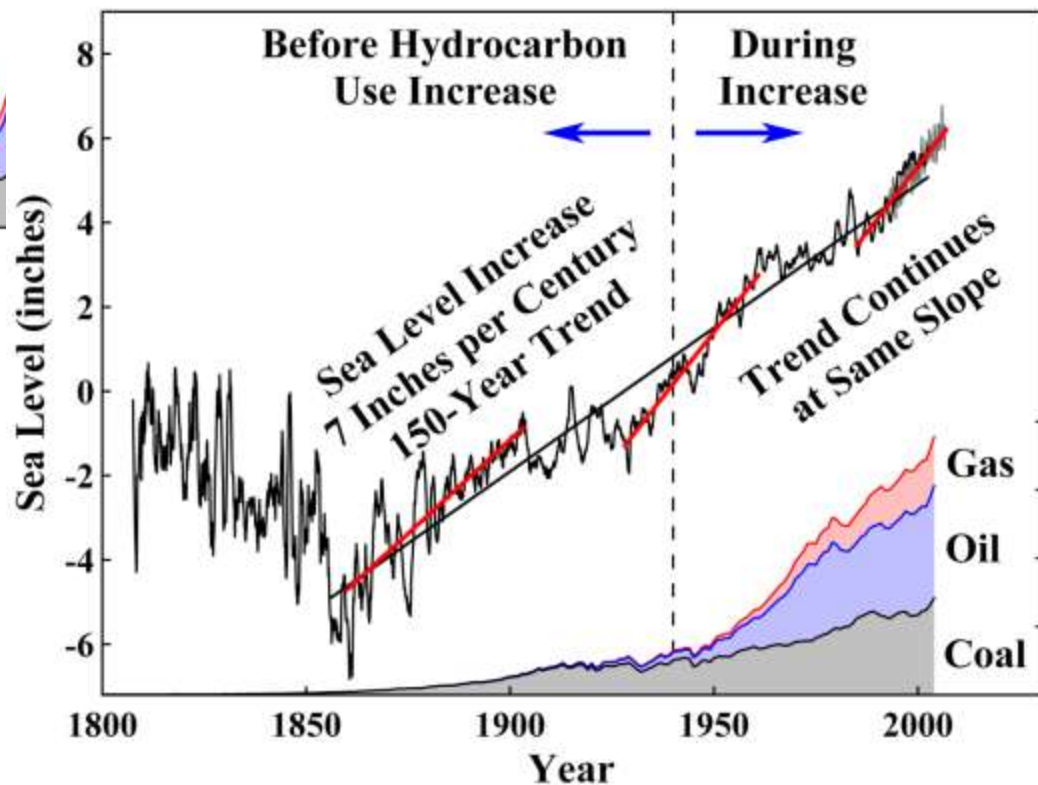
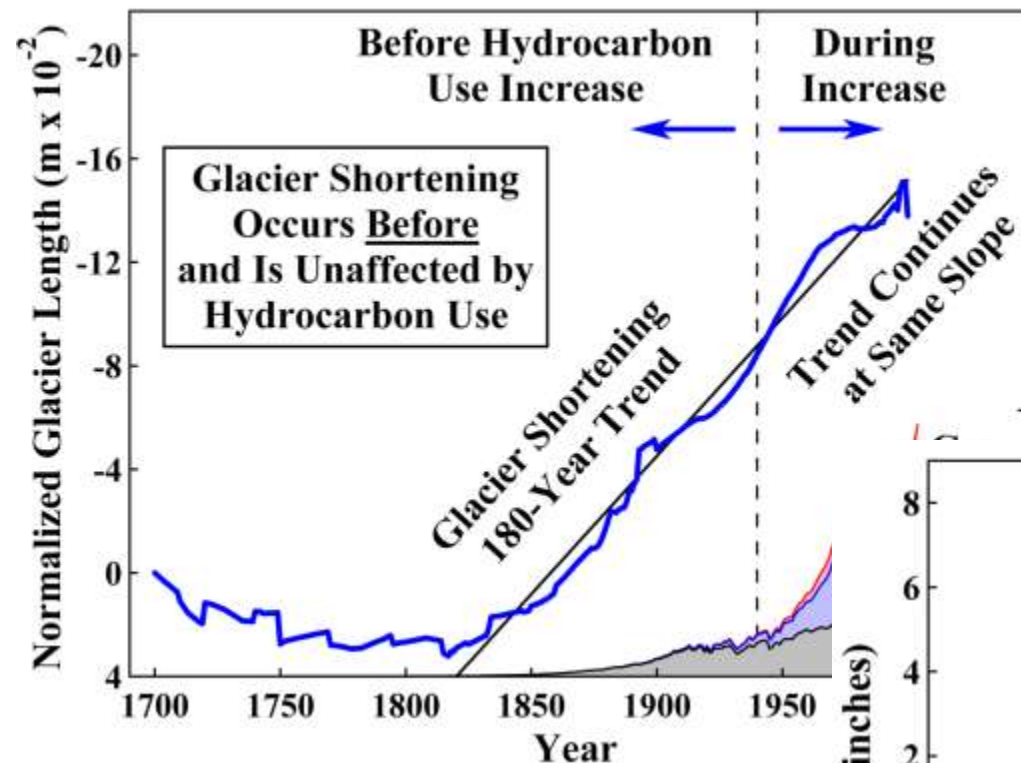
Glaciers Melting Fast

Recent satellite studies are showing a rapid decline in glacial regions on mountains around the globe.

Glacial Retreat

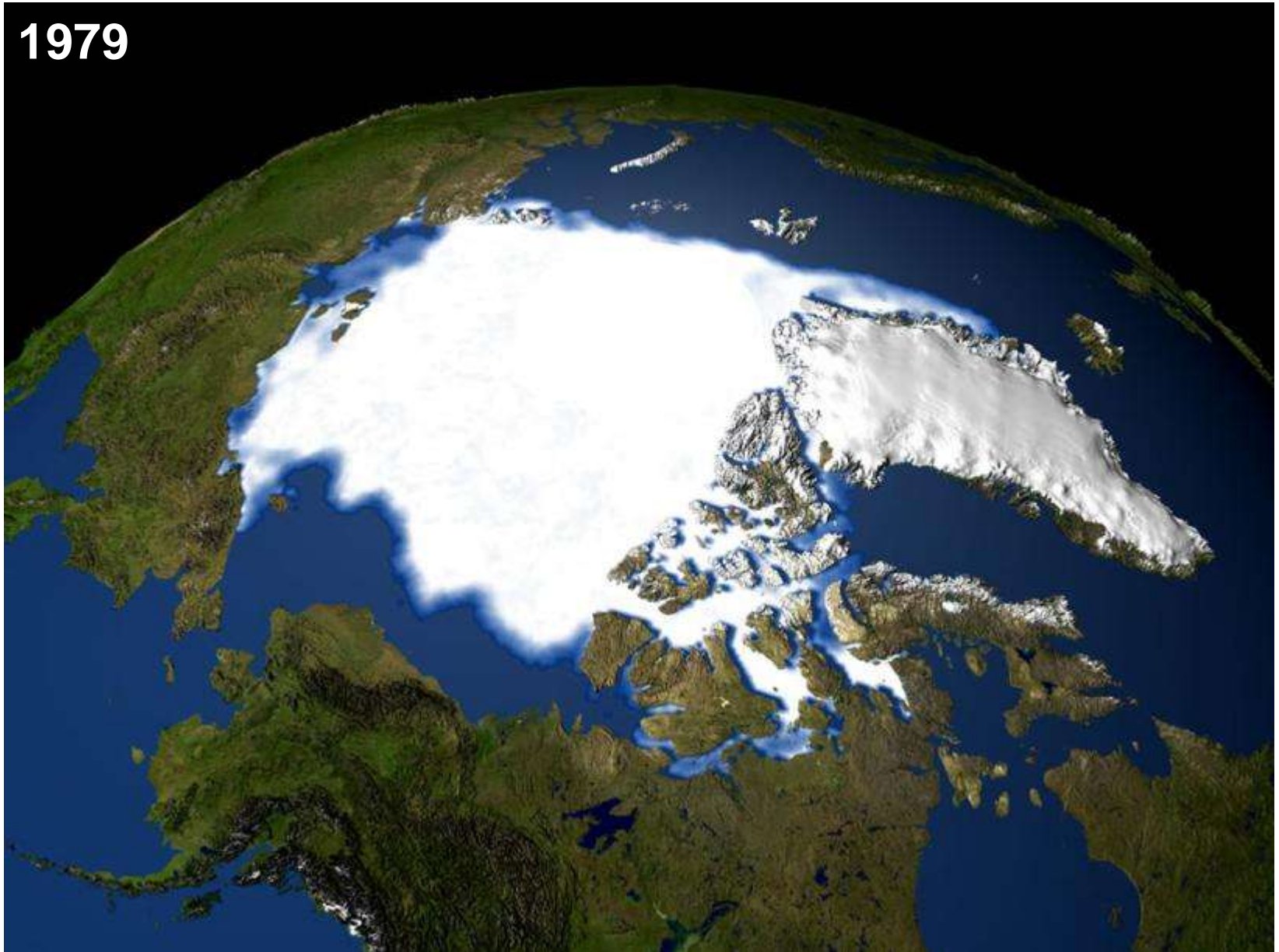


Sea-Level Increases Related To Glacial Retreat

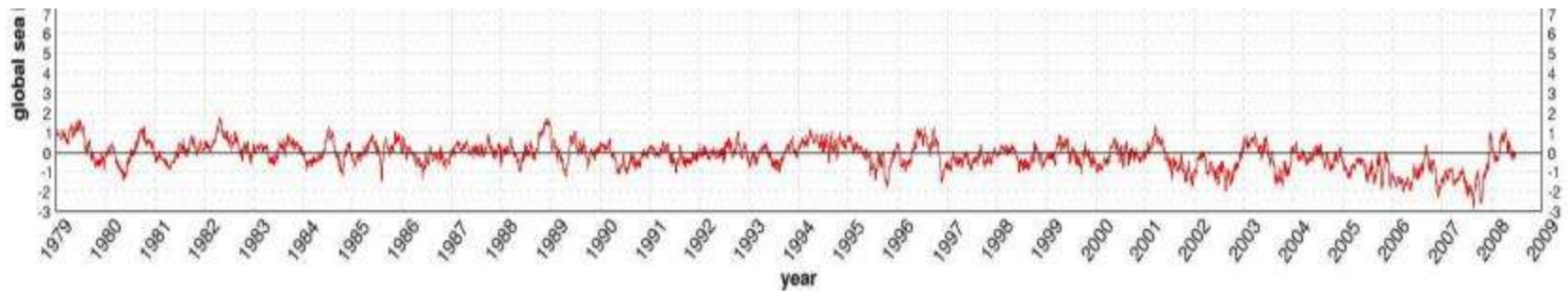
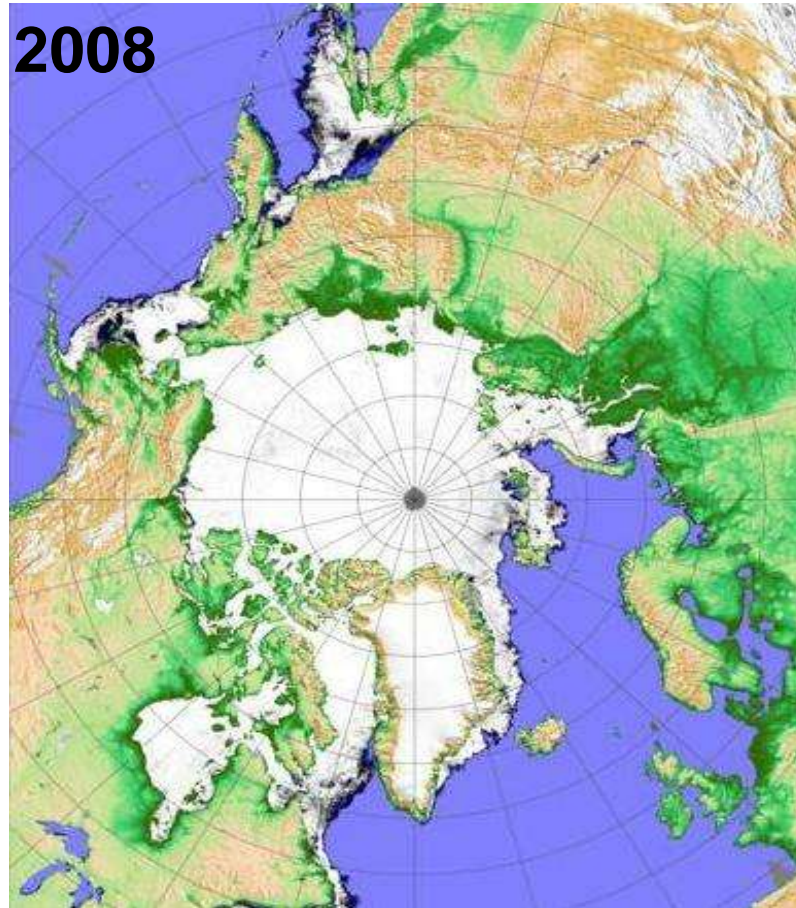


Arctic Sea Ice Is Melting

1979



Is Arctic Sea Ice Melting?



Glacial Retreat is reversing



1970



2000

Kilimanjaro



2008

Global Warming

A sunset over the ocean with a bright sun low on the horizon, casting a warm glow over the water. The sky transitions from a deep orange near the sun to a dark blue at the top. The ocean surface is dark with some whitecaps visible.

Real Crisis?

Alarmist Hype?

A complete list of things caused by global warming

[Acne](#), [agricultural land increase](#), [Afghan poppies destroyed](#), [Africa devastated](#), [African aid threatened](#), [Africa in conflict](#), [aggressive weeds](#), [air pressure changes](#), [Alaska reshaped](#), [Agulhas current moves](#), [Alps melting](#), [Amazon a desert](#), [American dream end](#), [amphibians breeding earlier \(or not\)](#), [anaphylactic reactions to bee stings](#), [ancient forests dramatically changed](#), [animals head for the hills](#), [Antarctic grass flourishes](#), [Antarctic ice grows](#), [Antarctic ice shrinks](#), [Antarctic sea life at risk](#), [anxiety treatment](#), [algal blooms](#), [archaeological sites threatened](#), [Arctic bogs melt](#), [Arctic in bloom](#), [Arctic ice free](#), [Arctic ice melt faster](#), [Arctic lakes disappear](#), [Arctic tundra to burn](#), [Arctic warming \(not\)](#), [Atlantic less salty](#), [Atlantic more salty](#), [atmospheric circulation modified](#), [attack of the killer jellyfish](#), [avalanches reduced](#), [avalanches increased](#), [Baghdad snow](#), [Bahrain under water](#), [bananas grow](#), [barbarisation](#), [beer shortage](#), [beetle infestation](#), [bet for \\$10,000](#), [better beer](#), [big melt faster](#), [billion dollar research projects](#), [billion homeless](#), [billions face risk](#), [billions of deaths](#), [bird distributions change](#), [bird loss accelerating](#), [bird visitors drop](#), [birds confused](#), [birds return early](#), [birds driven north](#), [bittern boom ends](#), [blackbirds stop singing](#), [blackbirds threatened](#), [Black Hawk down](#), [blue mussels return](#), [bluetongue](#), [brain eating amoebae](#), [brains shrink](#), [bridge collapse \(Minneapolis\)](#), [Britain Siberian](#), [brothels struggle](#), [brown Ireland](#), [bubonic plague](#), [budget increases](#), [Buddhist temple threatened](#), [building collapse](#), [building season extension](#), [bushfires](#), [business opportunities](#), [business risks](#), [butterflies move north](#), [camel deaths](#), [cancer deaths in England](#), [cannibalism](#), [caterpillar biomass shift](#), [cave paintings threatened](#), [childhood insomnia](#), [Cholera](#), [circumcision in decline](#), [cirrus disappearance](#), [civil unrest](#), [cloud increase](#), [cockroach migration](#), [coffee threatened](#), [cold climate creatures survive](#), [cold spells \(Australia\)](#), [cold wave \(India\)](#), [computer models](#), [conferences](#), [conflict](#), [conflict with Russia](#), [consumers foot the bill](#), [coral bleaching](#), [coral fish suffer](#), [coral reefs dying](#), [coral reefs grow](#), [coral reefs shrink](#), [coral reefs twilight](#), [cost of trillions](#), [cougar attacks](#), [cradle of civilisation threatened](#), [creatures move uphill](#), [crime increase](#), [crocodile sex](#), [crops devastated](#), [crumbling roads, buildings and sewage systems](#), [curriculum change](#), [cyclones \(Australia\)](#), [danger to kid's health](#), [Darfur](#), [Dartford Warbler plague](#), [death rate increase \(US\)](#), [Dengue hemorrhagic fever](#), [depression](#), [desert advance](#), [desert retreat](#), [destruction of the environment](#), [disappearance of coastal cities](#), [diseases move north](#), [Dolomites collapse](#), [drought](#), [ducks and geese decline](#), [dust bowl in the corn belt](#), [early marriages](#), [early spring](#), [earlier pollen season](#), [Earth biodiversity crisis](#), [Earth dying](#), [Earth even hotter](#), [Earth light dimming](#), [Earth lopsided](#), [Earth melting](#), [Earth morbid fever](#), [Earth on fast track](#), [Earth past point of no return](#), [Earth slowing down](#), [Earth spins faster](#), [Earth to explode](#), [earth upside down](#), [earthquakes](#), [earthquakes redux](#), [El Niño intensification](#), [end of the world as we know it](#), [erosion](#), [emerging infections](#), [encephalitis](#), [English villages lost](#), [equality threatened](#), [Europe simultaneously baking and freezing](#), [eutrophication](#), [evolution accelerating](#), [expansion of university climate groups](#), [extinctions \(human, civilisation, logic, Inuit, smallest butterfly, cod, ladybirds, pikas, polar bears, walrus, toads, plants, salmon, trout, wild flowers, woodlice, a million species, half of all animal and plant species, mountain species, not polar bears, barrier reef, leaches, tropical insects\)](#), [experts muzzled](#), [extreme changes to California](#), [fading fall foliage](#), [fainting](#), [famine](#), [farmers benefit](#), [farmers go under](#), [farm output boost](#), [fashion disaster](#), [fever](#), [figurehead sacked](#), [fir cone bonanza](#), [fish bigger](#), [fish catches drop](#), [fish downsize](#), [fish catches rise](#), [fish deaf](#), [fish get lost](#), [fish stocks at risk](#), [fish stocks decline](#), [five million illnesses](#), [flesh eating disease](#), [flood patterns change](#), [floods](#), [floods of beaches and cities](#), [flood of migrants](#), [flood preparation for crisis](#), [Florida economic decline](#), [flowers in peril](#), [food poisoning](#), [food prices rise](#), [food prices soar](#), [food security threat \(SA\)](#), [footpath erosion](#), [forest decline](#), [forest expansion](#), [frog with extra heads](#), [frostbite](#), [frost damage increased](#), [frosts](#), [fungi fruitful](#), [fungi invasion](#), [games change](#), [Garden of Eden wilts](#), [genetic diversity decline](#), [gene pools slashed](#), [giant oysters invade](#), [giant pythons invade](#), [giant squid migrate](#), [gingerbread houses collapse](#),

A complete list of things caused by global warming (cont)

[glacial earthquakes](#), [glacial retreat](#), [glacial growth](#), [glacier grows \(California\)](#), [glacier wrapped](#), [global cooling](#), [global dimming](#), [glowing clouds](#), [golf Masters wrecked](#), [grandstanding](#), [grasslands wetter](#), [Great Barrier Reef 95% dead](#), [Great Lakes drop](#), [great tits cope](#), [greening of the North](#), [Grey whales lose weight](#), [Gulf Stream failure](#), [habitat loss](#), [Hantavirus pulmonary syndrome](#), [harmful algae](#), [harvest increase](#), [harvest shrinkage](#), [hay fever epidemic](#), [health affected](#), [health of children harmed](#), [heart disease](#), [heart attacks and strokes \(Australia\)](#), [heat waves](#), [hibernation affected](#), [hibernation ends too soon](#), [hibernation ends too late](#), [HIV epidemic](#), [homeless 50 million](#), [hornets](#), [high court debates](#), [human development faces unprecedented reversal](#), [human fertility reduced](#), [human health risk](#), [human race oblivion](#), [hurricanes](#), [hurricane reduction](#), [hurricanes fewer](#), [hurricanes not](#), [hydropower problems](#), [hyperthermia deaths](#), [ice age](#), [ice sheet growth](#), [ice sheet shrinkage](#), [illness and death](#), [inclement weather](#), [India drowning](#), [infrastructure failure \(Canada\)](#), [industry threatened](#), [infectious diseases](#), [inflation in China](#), [insect explosion](#), [insurance premium rises](#), [Inuit displacement](#), [Inuit poisoned](#), [Inuit suing](#), [invasion of cats](#), [invasion of herons](#), [invasion of jellyfish](#), [invasion of midges](#), [island disappears](#), [islands sinking](#), [itchier poison ivy](#), [jellyfish explosion](#), [jets fall from sky](#), [jet stream drifts north](#), [Kew Gardens taxed](#), [kidney stones](#), [killer cornflakes](#), [killing us](#), [kitten boom](#), [koalas under threat](#), [krill decline](#), [lake and stream productivity decline](#), [lake empties](#), [lake shrinking and growing](#), [landslides](#), [landslides of ice at 140 mph](#), [lawsuits increase](#), [lawsuit successful](#), [lawyers' income increased \(surprise surprise!\)](#), [lives saved](#), [Loch Ness monster dead](#), [lush growth in rain forests](#), [Malaria](#), [mammoth dung melt](#), [mango harvest fails](#), [Maple production advanced](#), [Maple syrup shortage](#), [marine diseases](#), [marine food chain decimated](#), [Meaching \(end of the world\)](#), [Mediterranean rises](#), [megacryometeors](#), [Melanoma](#), [methane emissions from plants](#), [methane burps](#), [methane runaway](#), [melting permafrost](#), [Middle Kingdom convulses](#), [migration](#), [migration difficult \(birds\)](#), [migratory birds huge losses](#), [microbes to decompose soil carbon more rapidly](#), [minorities hit](#), [monkeys on the move](#), [Mont Blanc grows](#), [monuments imperiled](#), [moose dying](#), [more bad air days](#), [more research needed](#), [mortality increased](#), [mountain \(Everest\) shrinking](#), [mountaineers fears](#), [mountains break up](#), [mountains green and flowering](#), [mountains taller](#), [mortality lower](#), [Myanmar cyclone](#), [narwhals at risk](#), [National security implications](#), [native wildlife overwhelmed](#), [natural disasters quadruple](#), [new islands](#), [next ice age](#), [NFL threatened](#), [Nile delta damaged](#), [noctilucent clouds](#), [no effect in India](#), [Northwest Passage opened](#), [nuclear plants bloom](#), [oaks dying](#), [oaks move north](#), [ocean acidification](#), [ocean deserts expand](#), [ocean waves speed up](#), [opera house to be destroyed](#), [outdoor hockey threatened](#), [ozone repair slowed](#), [ozone rise](#), [Pacific dead zone](#), [penguin chicks frozen](#), [personal carbon rationing](#), [pest outbreaks](#), [pests increase](#), [phenology shifts](#), [plankton blooms](#), [plankton destabilised](#), [plants march north](#), [plants move uphill](#), [polar bears aggressive](#), [polar bears cannibalistic](#), [polar bears drowning](#), [polar tours scrapped](#), [popcorn rise](#), [porpoise astray](#), [profits collapse](#), [psychiatric illness](#), [puffin decline](#), [radars taken out](#), [railroad tracks deformed](#), [rainfall increase](#), [rape wave](#), [refugees](#), [release of ancient frozen viruses](#), [resorts disappear](#), [rice threatened](#), [rice yields crash](#), [rift on Capitol Hill](#), [rioting and nuclear war](#), [river flow impacted](#), [rivers raised](#), [roads wear out](#), [robins rampant](#), [rocky peaks crack apart](#), [roof of the world a desert](#), [rooftop bars](#), [Ross river disease](#), [ruins ruined](#), [Russia under pressure](#), [salinity reduction](#), [salinity increase](#), [Salmonella](#), [satellites accelerate](#), [school closures](#), [sea level rise](#), [sea level rise faster](#), [seals mating more](#), [sewer bills rise](#), [severe thunderstorms](#), [sex change](#), [sexual promiscuity](#), [shark attacks](#), [sharks booming](#), [sharks moving north](#), [sheep shrink](#), [shop closures](#), [short-nosed dogs endangered](#), [shrinking ponds](#), [shrinking shrine](#), [ski resorts threatened](#), [skin cancer](#), [slow death](#), [smaller brains](#), [smog](#), [snowfall increase](#), [snowfall heavy](#), [soaring food prices](#), [societal collapse](#), [songbirds change eating habits](#), [sour grapes](#), [space problem](#), [spectacular orchids](#), [spiders invade Scotland](#), [squid aggressive giants](#), [squid population explosion](#), [squirrels reproduce earlier](#),

A complete list of things caused by global warming (cont)

stingray invasion, storms wetter, stormwater drains stressed, street crime to increase, subsidence, suicide, swordfish in the Baltic, Tabasco tragedy, taxes, tectonic plate movement, teenage drinking, terrorism, threat to peace, ticks move northward (Sweden), tides rise, tomatoes rot, tornado outbreak, tourism increase, trade barriers, trade winds weakened, traffic jams, transportation threatened, tree foliage increase (UK), tree growth slowed, trees in trouble, trees less colourful, trees more colourful, trees lush, tropics expansion, tropopause raised, truffle shortage, turtles crash, turtles lay earlier, UK coastal impact, UK Katrina, Vampire moths, Venice flooded, volcanic eruptions, walrus pups orphaned, walrus stampede, war, wars over water, wars sparked, wars threaten billions, wasps, water bills double, water scarcity (20% of increase), water stress, weather out of its mind, weather patterns awry, Western aid cancelled out, West Nile fever, whales move north, whales wiped out, wheat yields crushed in Australia, wildfires, wind shift, wind reduced, wine - harm to Australian industry, wine industry damage (California), wine industry disaster (US), wine - more English, wine - England too hot, wine -German boon, wine - no more French, wine passé (Napa), wine stronger, winters in Britain colder, winter in Britain dead, witchcraft executions, wolves eat more moose, wolves eat less, workers laid off, World at war, World bankruptcy, World in crisis, World in flames, Yellow fever.

All For 0.8° C

If That's Not Hype What Is?

Global Warming Just the Facts

Sea Level Increase

**Historical rate of 0.07 inches/year not catastrophic
May go down**

No more droughts or storms than normal

**Ice melting is normal for interglacial
periods**

Global Warming Just the Facts

CO₂ Is Not The Cause of Global Warming

Temperature increases cause CO₂ increases

CO₂ Levels may be high enough to Impact Climate

Solar Activity Has a Stronger Impact

**Changes in Oceanic Circulation Have a
Stronger Impact**

Global Warming Just the Facts

From mid 1800's to 1998

Temperatures increased 0.8° C

From 1998 to 2007

Temperatures were flat

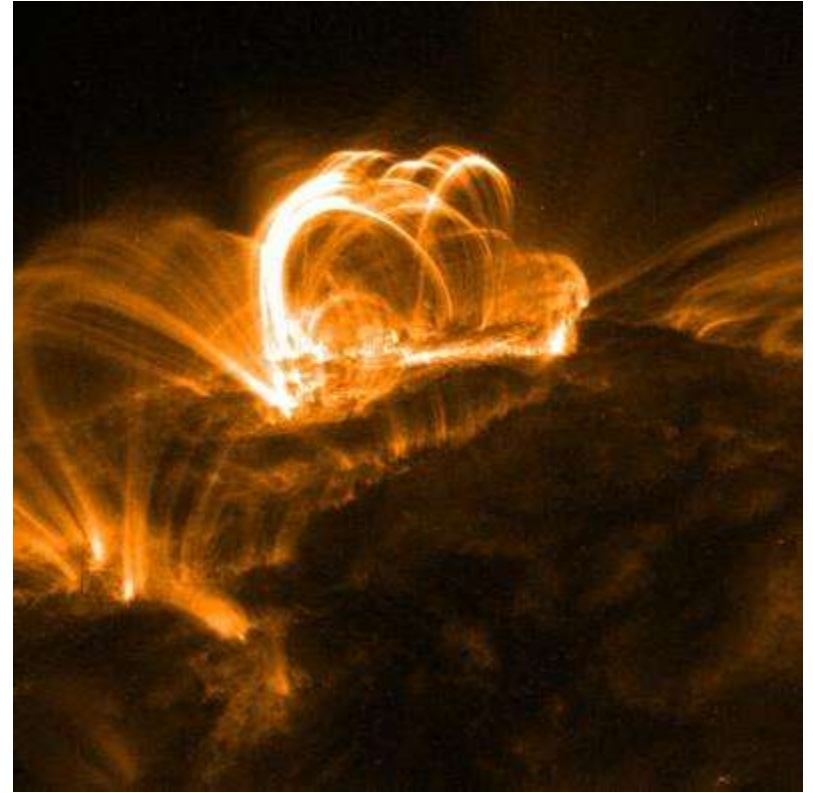
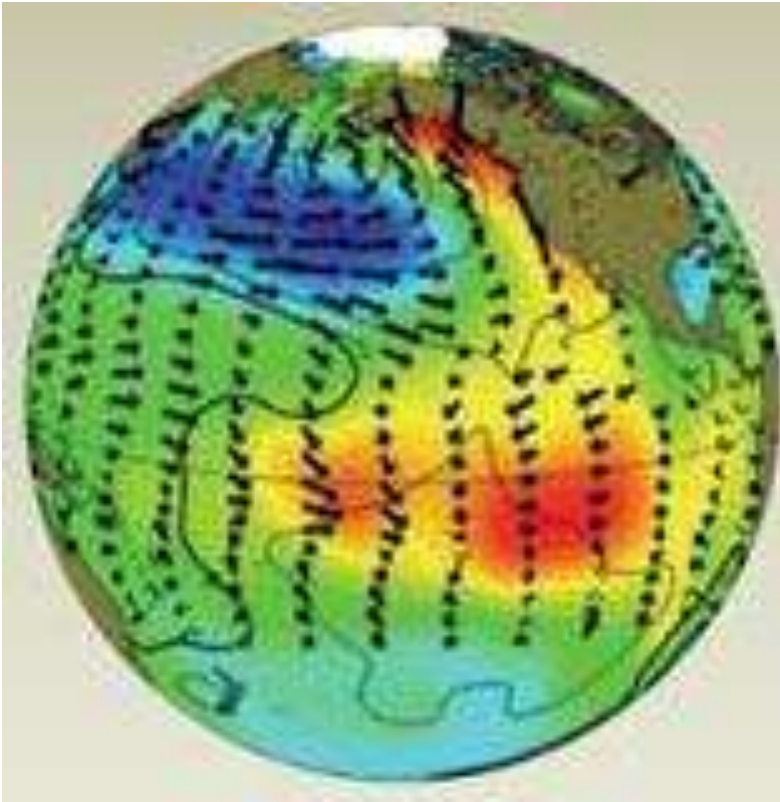
From 2007 to 2008

Temperatures fell 0.6 to 0.7° C

CAUTION: Above Statements based on Global Averages

Solar Activity is at low levels

PDO is in Cool Phase



Suggests Continued Cooling

**We Interrupt this SPE Presentation
to Bring You A**

Special News Bulletin

This Just In

Global Warming Has Ended – The Next Climate Change to A Pronounced Cold Era Has Begun.

“After an exhaustive review of a substantial body of climate research, and in conjunction with the obvious and compelling new evidence that exists, it is time that the world community acknowledges that the Earth has begun its next climate change. In an opinion echoed by many scientists around the world, the Space and Science Research Center (SSRC), today declares that the world’s climate warming of the past decades has now come to an end. A new climate era has already started that is bringing predominantly colder global temperatures for many years into the future. In some years this new climate will create dangerously cold weather with significant ill-effects world wide. Global warming is over – a new cold climate has begun.”

[Space & Science](#) (Tuesday 1 July)

This Has Been A

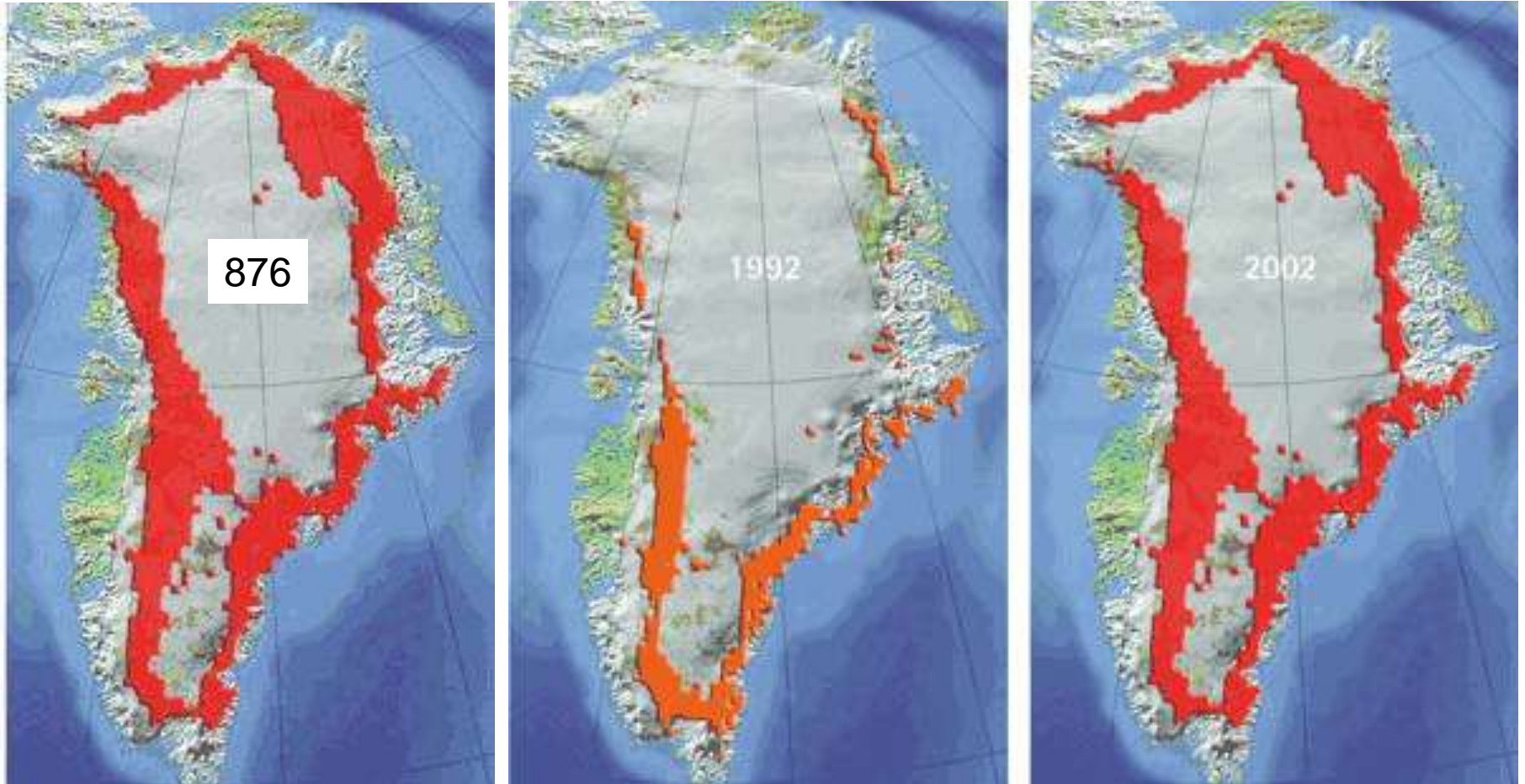
Special News Bulletin

**We Now Return to Your
Regularly Scheduled
SPE Presentation**

Headlines

Greenland Ice Disappearing

Greenland was Green when it was discovered in 876



Been There, Done That

Headlines

The Arctic is Melting

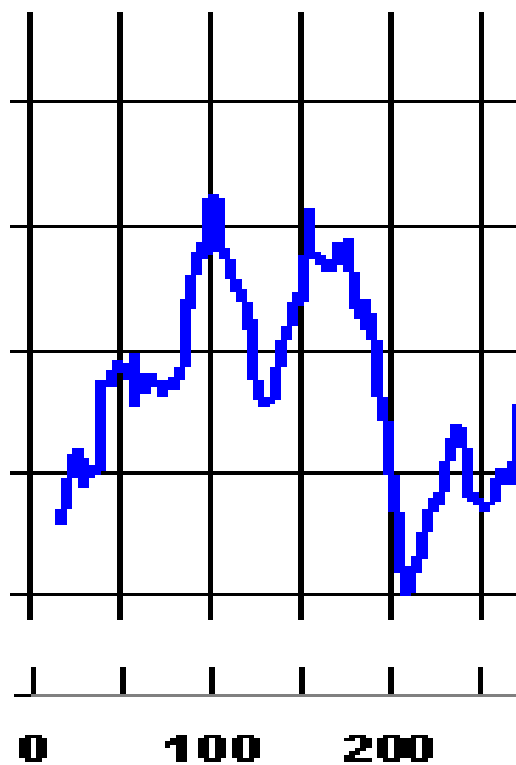
The Arctic seems to be warming up. Reports from fishermen, seal hunters, and explorers who sail the seas about Spitzbergen and the eastern Arctic, all point to a radical change in climatic conditions, and hitherto unheard-of high temperatures in that part of the earth's surface. **1922**

Been There, Done That Too

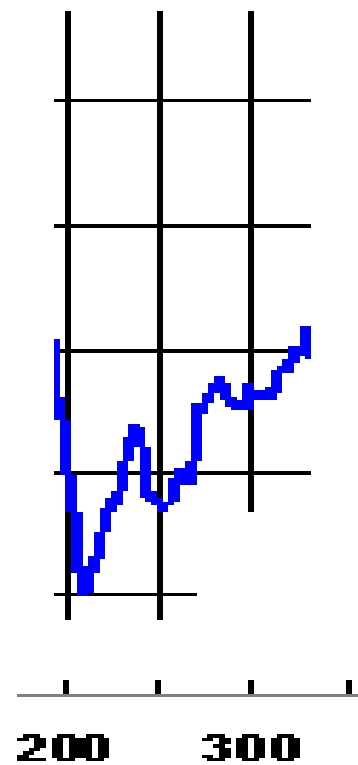


Earth Survived, Polar Bears Thrived

What Does History Teach US



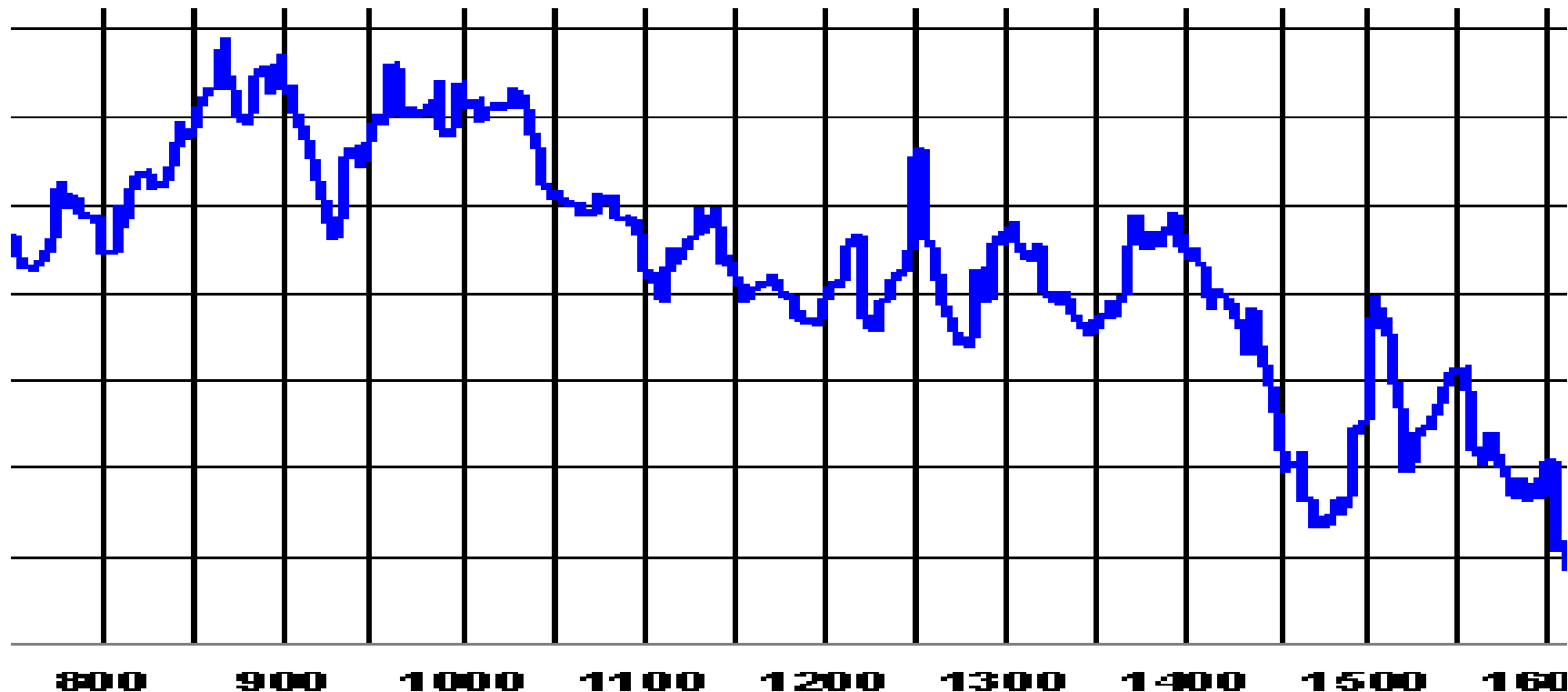
**Roman Empire Flourishes
Peaks at AD 117**



**Crisis of the 3rd Century
AD 235 - 284**

Warm Good; Cold Bad

What Does History Teach US



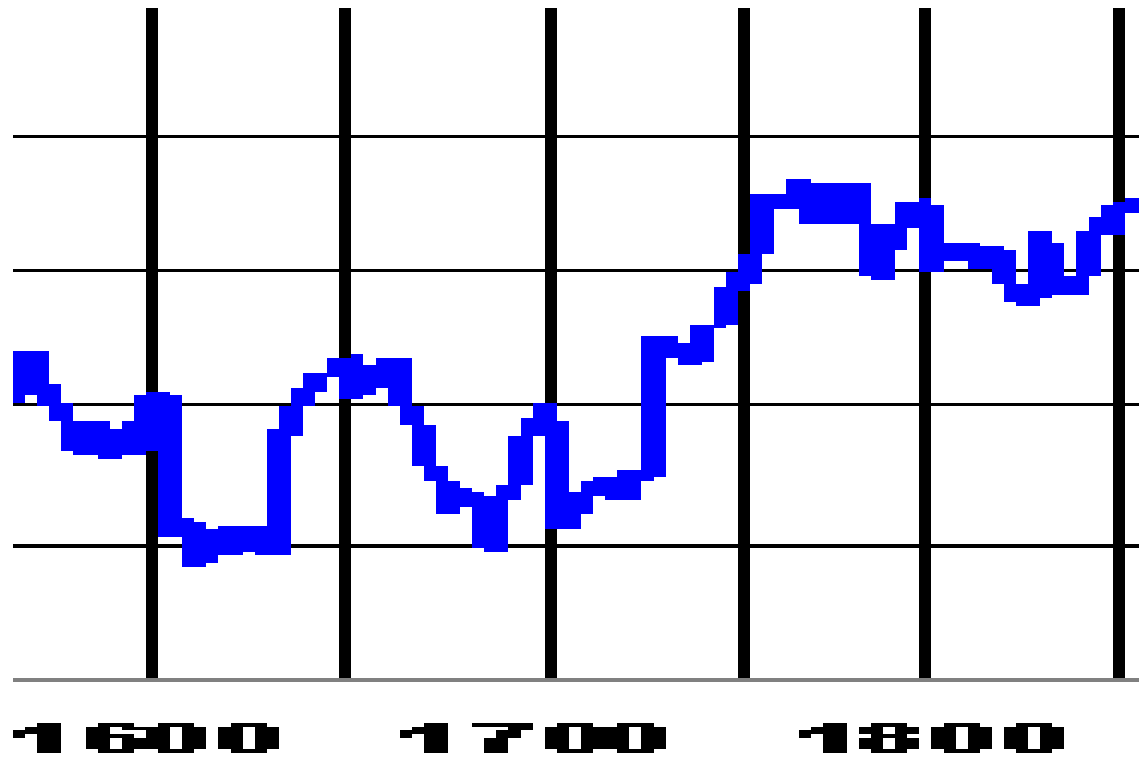
Viking Age
AD 793 – 1066

Renaissance
AD 1300 - 1600

Greenland Discovered 876

Warm Good

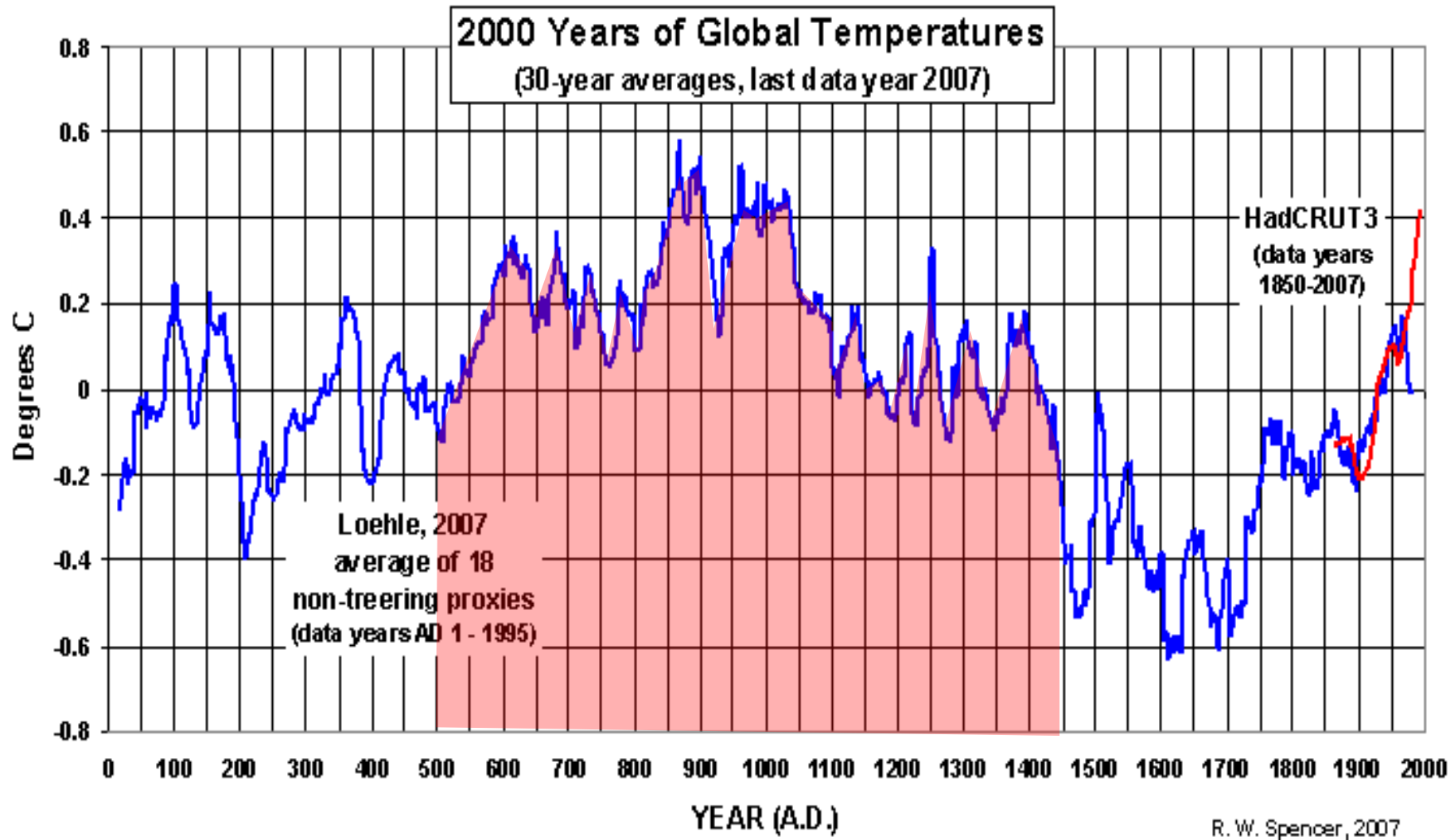
What Does History Teach US



Little Ice Age
Hunger and Famine

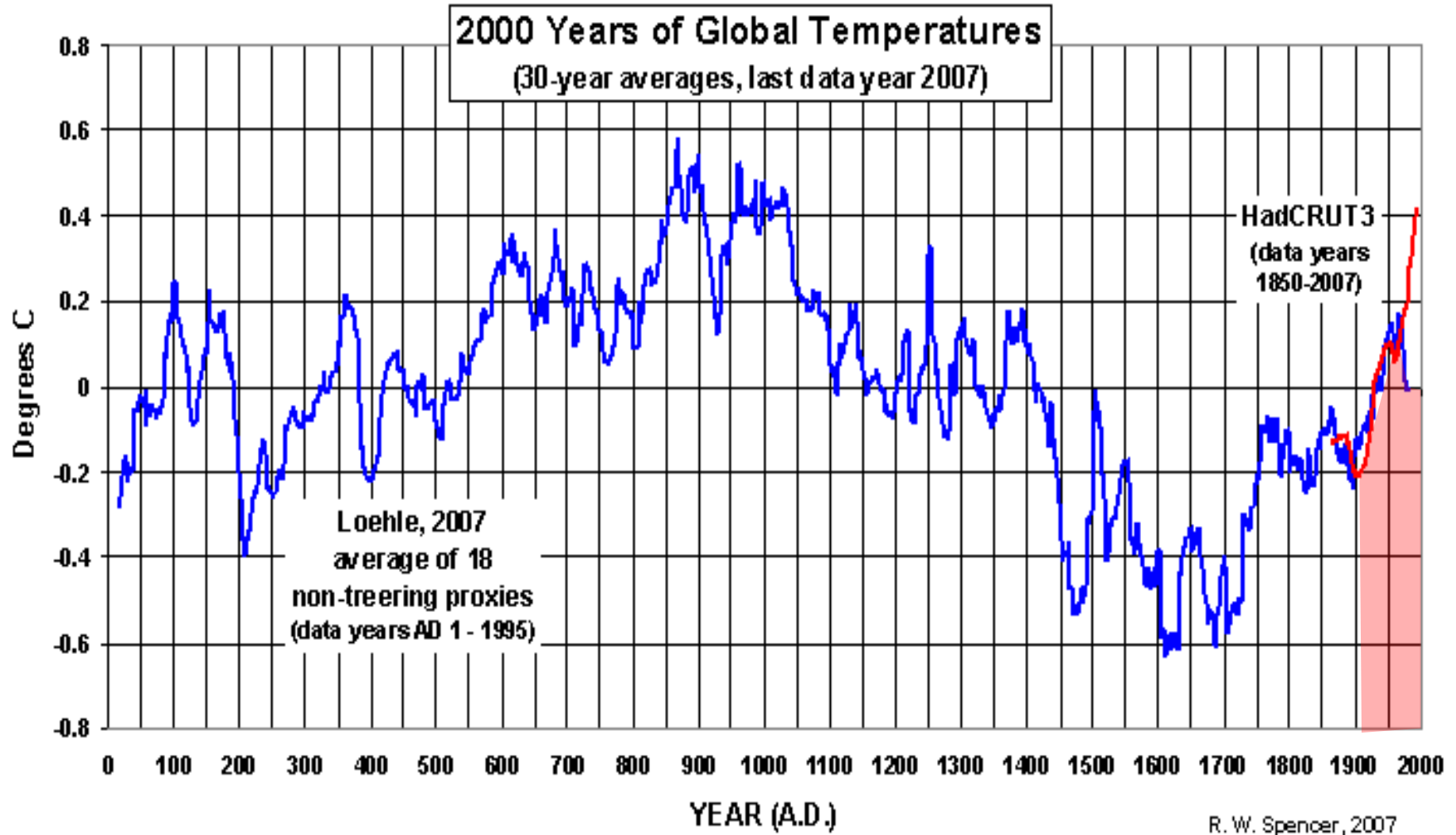
Cold Bad

Medieval Climate Optimum



Not Medieval Climate Crisis

Why Call This A Climate Crisis?



Modern Climate Optimum

Human Kind Does Better When it is Warmer



**Makes no sense to spend billions of
dollars to make it colder?**

NASA Goddard Institute for Space Studies

www.giss.nasa.gov

The Natural Resources Stewardship Project

by Timothy Ball, Ph.D.

www.nrsp.com

Global Warming and Nature's Thermostat

by Roy W. Spencer, Ph.D.

www.weatherquestions.com

Oregon Institute of Science and Medicine

Drs. Noah and Art Robinson

www.oism.org

Science and Environmental Policy Project

by Fred Singer, Ph.D.

www.sepp.org

Al Gore is a Liar and a Hypocrite

Liar

“Nobody is interested in solutions if they don't think there's a problem. Given that starting point, *I believe it is appropriate to have an over-representation of factual presentations on how dangerous it is*, as a predicate for opening up the audience to listen to what the solutions are, and how hopeful it is that we are going to solve this crisis.”

Al Gore, Interview with Grist



Hypocrite