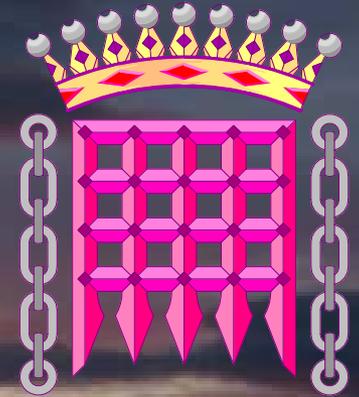


Climate Change: A Policymaker's Perspective

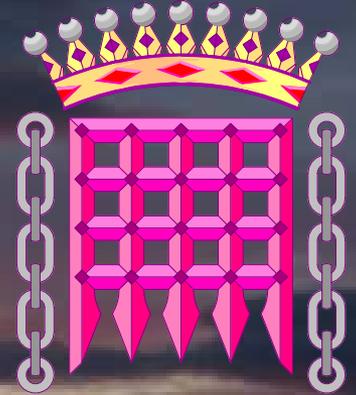
University of Hartford: 5 March 2008

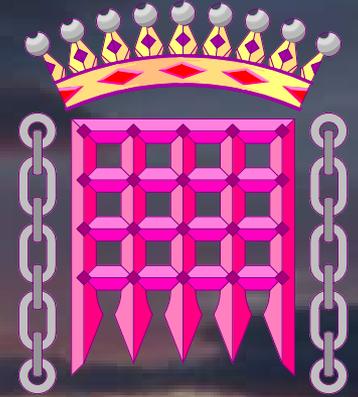


**God
bless
America**



**“You
have
to get
the big
ones
right,
dear!”**



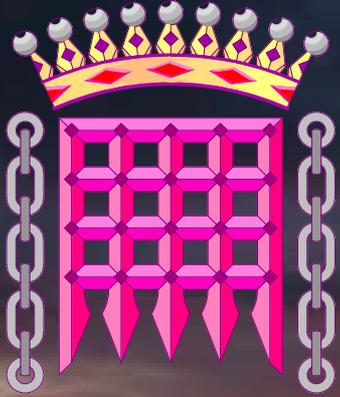


E.R.M.
1990-92
R.I.P.

11-4=0



What the debate
is not about

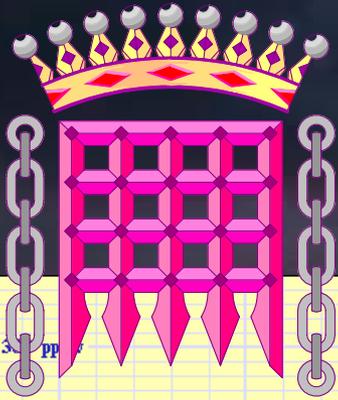


Not about whether we
can heedlessly pollute

**“And God said, Let us make man
in our image, after our likeness:
and let them have dominion over
the fish of the sea, and over the
fowl of the air, and over the cattle,
and over all the earth.”**

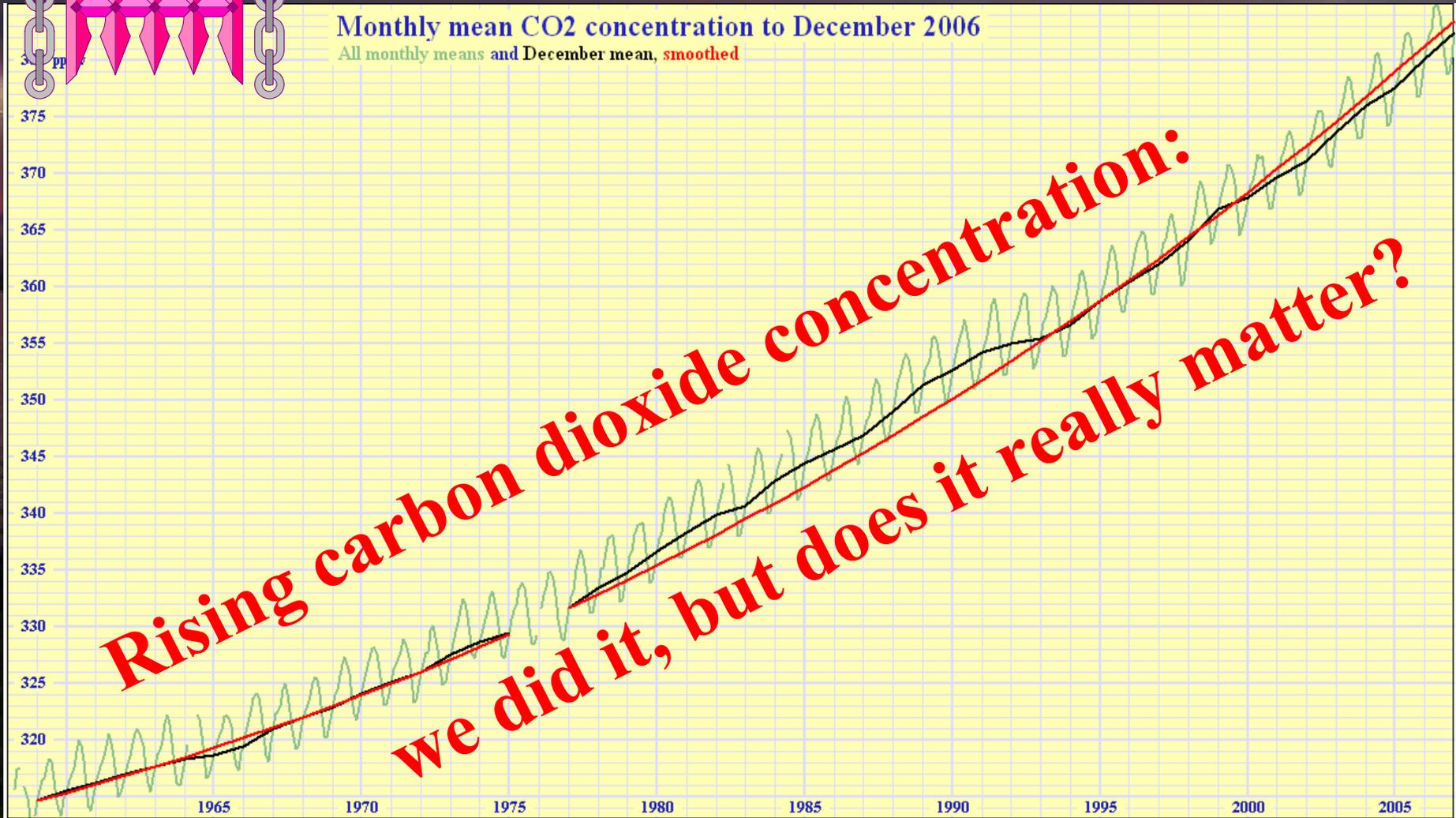
Genesis I: 26

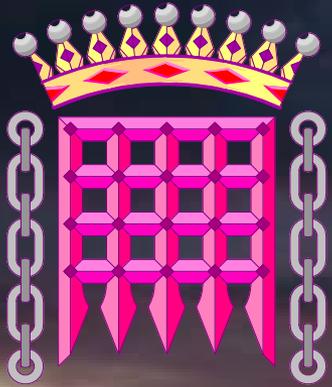
Not about whether we're adding CO₂



Monthly mean CO₂ concentration to December 2006

All monthly means and December mean, *smoothed*





Not about whether we're affecting climate

Natural G.H.E.: 100% 100 W m⁻² 20 °K

Our forcings: <2% 1.6 W m⁻²

Feedbacks: <3% 2.9 W m⁻²

Our effect: <5% 4.5 W m⁻² 0.9 °K

IPCC calculation: 1.4 °K

G.H.E. 100 W m⁻²: Kiehl & Trenberth (1997)

G.H.E. 20 °K: Houghton (2006)

Forcings, feedbacks: IPCC (2007)



Not about
whether
it's getting
warmer

From
Prof.
M.I. Bhat
(2007)

18th
Century

1900

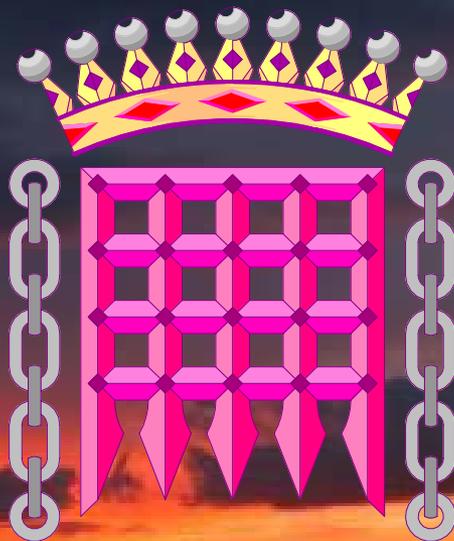
1950

1970

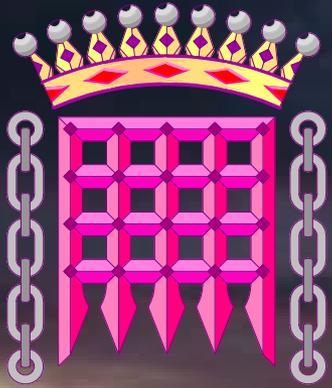
1980

1990

2006



**10 propositions:
are they true?**



Climate science is honest

The scientific debate is over

Temperature is now exceptional

Natural change is not to blame

Greenhouse gases are to blame

Our climate fingerprint is clear

Models are getting it right

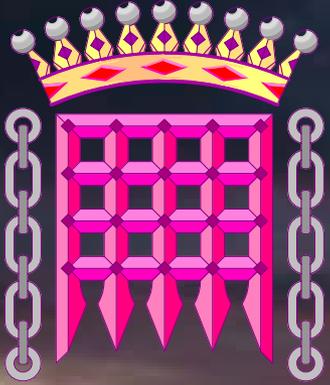
Warming will cause disasters

Mitigation is cost-effective

Best to act now, just in case

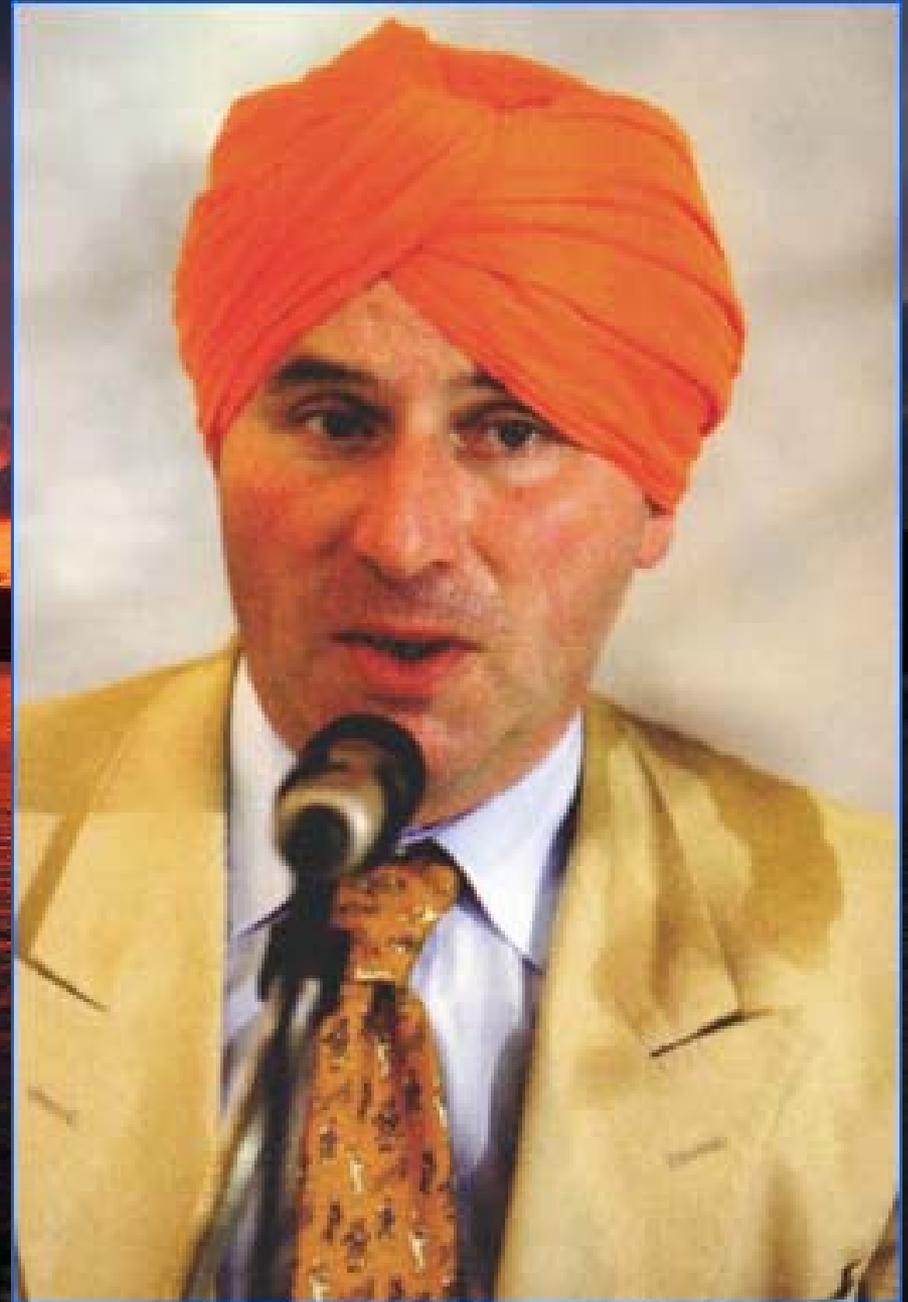


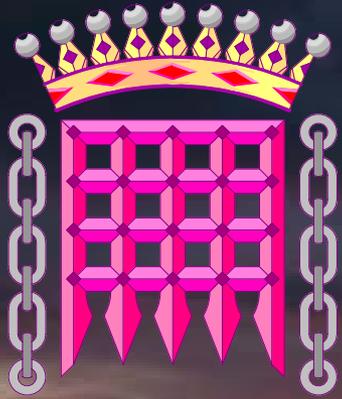
**Are the scientists
honest?**



**“We cannot
question what
the scientists
say.”**

**Oliver Letwin,
UK Tory policy chief**



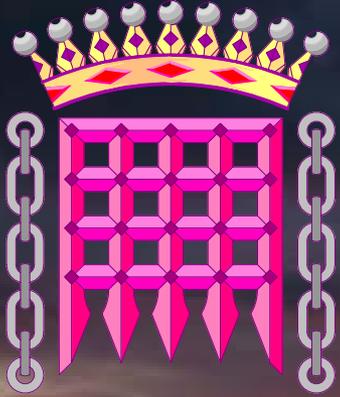


Scientific method

“The improver of natural knowledge absolutely refuses to acknowledge authority, as such. For him, scepticism is the highest of duties; blind faith the one unpardonable sin.”

T.H. Huxley

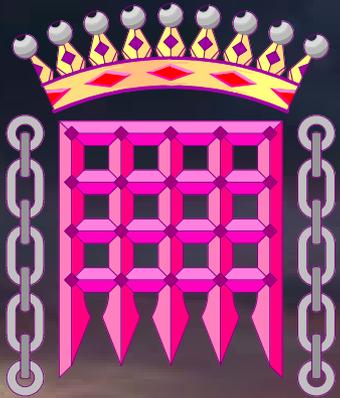




Peer-reviewed science references

Backing Gore's film: 2

Backing this talk: 300



Concerned scientists?



Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

2006

273 endnote references, of which ...

104 references to statements *against* climate disaster

37 references to statements *for* climate disaster

36 references to statements in the mass media

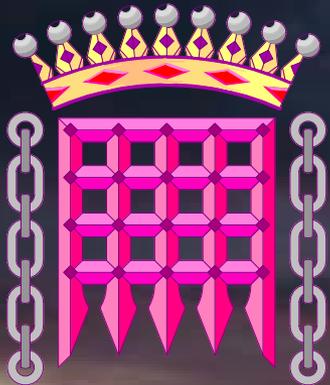
31 references to corporate documents

31 references to tobacco documents

23 references to statements by official bodies

23 references to statements from books and essays

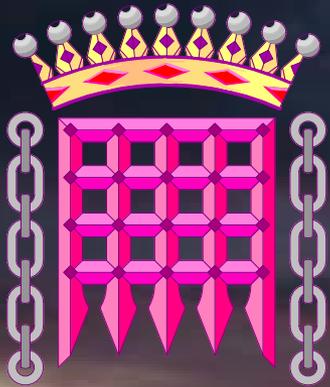
3 references to peer-reviewed scientific papers



**“Unless we
announce
disasters,
no one will
listen.”**



Sir John Houghton



“We have to offer up scary scenarios ... Each of us has to decide what the right balance is between being effective and being honest. I hope that means being both.”

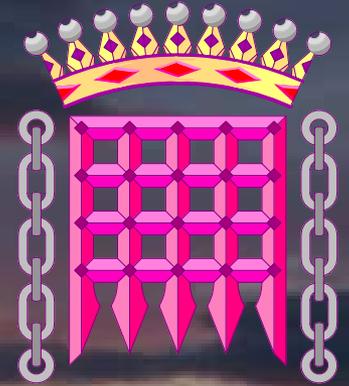
Stephen Schneider



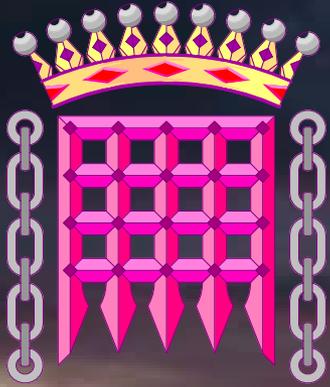


Are the *bien-*
pensants honest?

**Al
Gore**



**“I believe it is
appropriate to
have an over-
representation
of factual
presentations
on how
dangerous it is.”**



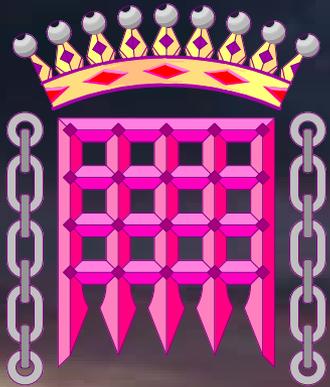
**Which headline
sells more papers?**

World To End Shock!

or

Continuing Changeable

?



“Global Cooling”

Newsweek (1975)

SCIENCE

The Cooling World

There are ominous signs that the earth's weather patterns have begun to change dramatically and that these changes may portend a drastic decline in food production—with serious political implications for just about every nation on earth. The drop in food output could begin quite soon, perhaps only ten years from now. The regions destined to feel its impact are the great wheat-producing lands of Canada and the U.S.S.R. in the north, along with a number of marginally self-sufficient tropical areas—parts of India, Pakistan, Bangladesh, Indochina and Indonesia—where the growing season is dependent upon the rains brought by the monsoon.

The evidence in support of these predictions has now begun to accumulate so massively that meteorologists are hard-

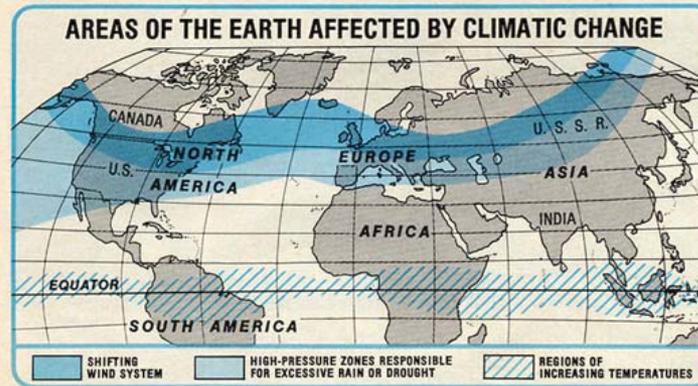
reduce agricultural productivity for the rest of the century. If the climatic change is as profound as some of the pessimists fear, the resulting famines could be catastrophic. “A major climatic change would force economic and social adjustments on a worldwide scale,” warns a recent report by the National Academy of Sciences, “because the global patterns of food production and population that have evolved are implicitly dependent on the climate of the present century.”

A survey completed last year by Dr. Murray Mitchell of the National Oceanic and Atmospheric Administration reveals a drop of half a degree in average ground temperatures in the Northern Hemisphere between 1945 and 1968. According to George Kukla of Columbia University, satellite photos indicated a sudden, large increase in Northern Hemisphere snow cover in the winter of 1971-72. And

ic change is at least as fragmentary as our data,” concedes the National Academy of Sciences report. “Not only are the basic scientific questions largely unanswered, but in many cases we do not yet know enough to pose the key questions.”

Extremes: Meteorologists think that they can forecast the short-term results of the return to the norm of the last century. They begin by noting the slight drop in over-all temperature that produces large numbers of pressure centers in the upper atmosphere. These break up the smooth flow of westerly winds over temperate areas. The stagnant air produced in this way causes an increase in extremes of local weather such as droughts, floods, extended dry spells, long freezes, delayed monsoons and even local temperature increases—all of which have a direct impact on food supplies.

“The world's food-producing system,” warns Dr. James D. McQuigg of NOAA's Center for Climatic and Environmental Assessment, “is much more sensitive to

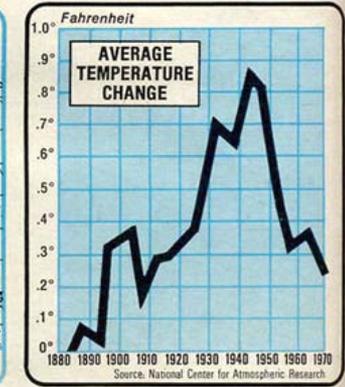


pressed to keep up with it. In England, farmers have seen their growing season decline by about two weeks since 1950, with a resultant over-all loss in grain production estimated at up to 100,000 tons annually. During the same time, the average temperature around the equator has risen by a fraction of a degree—a fraction that in some areas can mean drought and desolation. Last April, in the most devastating outbreak of tornadoes ever recorded, 148 twisters killed more than 300 people and caused half a billion dollars' worth of damage in thirteen U.S. states.

Trend: To scientists, these seemingly disparate incidents represent the advance signs of fundamental changes in the world's weather. The central fact is that after three quarters of a century of extraordinarily mild conditions, the earth's climate seems to be cooling down. Meteorologists disagree about the cause and extent of the cooling trend, as

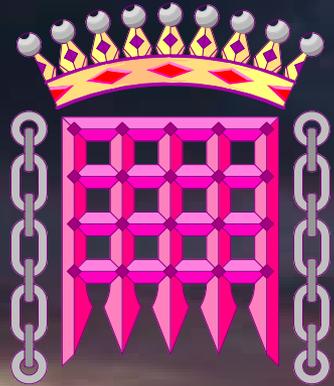
a study released last month by two NOAA scientists notes that the amount of sunshine reaching the ground in the continental U.S. diminished by 1.3 per cent between 1964 and 1972.

To the layman, the relatively small changes in temperature and sunshine can be highly misleading. Reid Bryson of the University of Wisconsin points out that the earth's average temperature during the great Ice Ages was only about 7 degrees lower than during its warmest eras—and that the present decline has taken the planet about a sixth of the way toward the Ice Age average. Others regard the cooling as a reversion to the “little ice age” conditions that brought bitter winters to much of Europe and northern America between 1600 and 1900—years when the Thames used to freeze so solidly that Londoners roasted oxen on the ice and when iceboats sailed the Hudson River almost as far south as New York City.

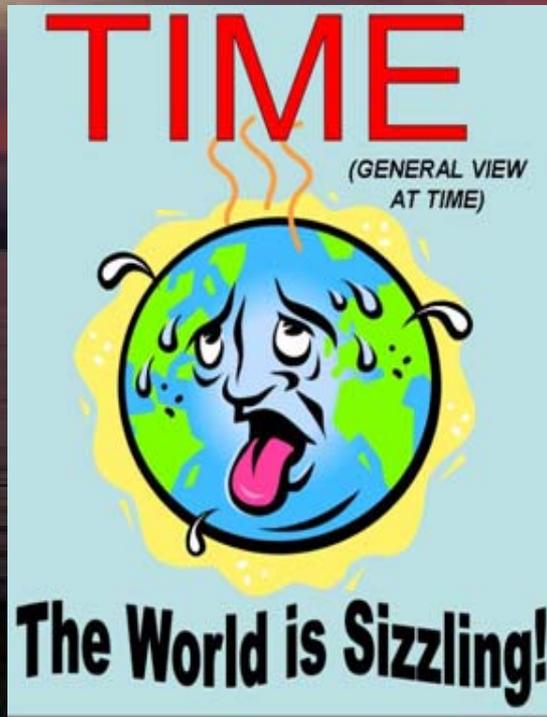


the weather variable than it was even five years ago.” Furthermore, the growth of world population and creation of new national boundaries make it impossible for starving peoples to migrate from their devastated fields, as they did during past famines.

Climatologists are pessimistic that political leaders will take any positive action to compensate for the climatic change, or even to allay its effects. They concede that some of the more spectacular solutions proposed, such as melting the arctic ice cap by covering it with black soot or diverting arctic rivers, might create problems far greater than those they solve. But the scientists see few signs that government leaders anywhere are even prepared to take the simple measures of stockpiling food or of introducing the variables of climatic uncertainty into economic projections of future food supplies. The longer the planners delay, the more difficult will



Blowing hot and cold ...



September 10, 1945

...*TIME*



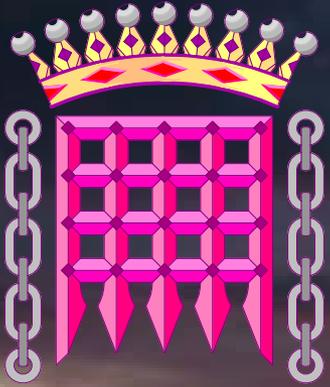
January 31, 1977

... after *TIME*

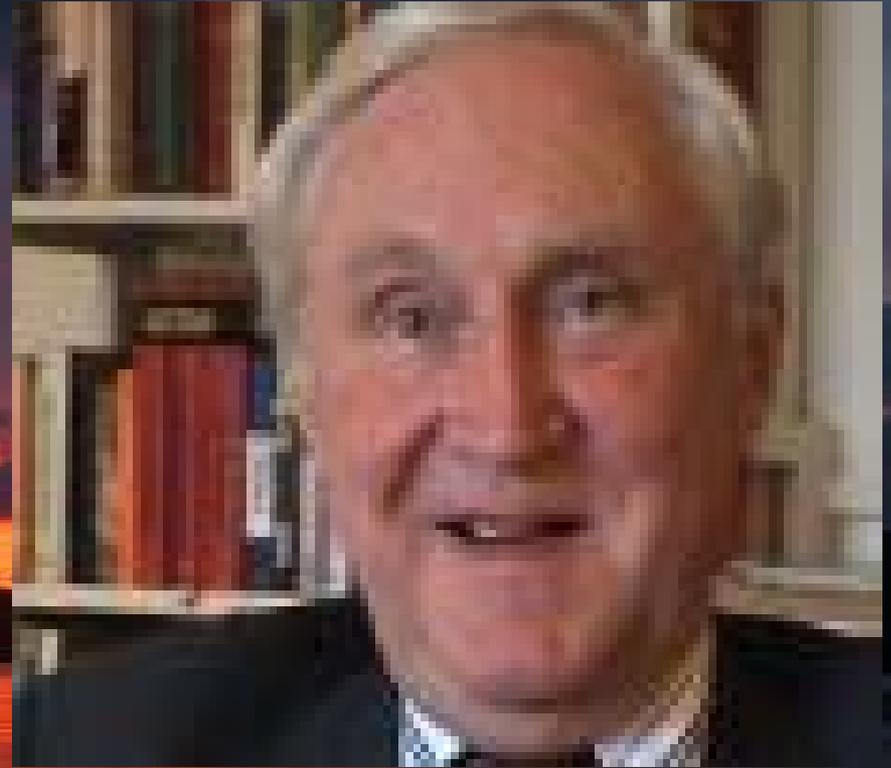


April 3, 2006

... after *TIME*

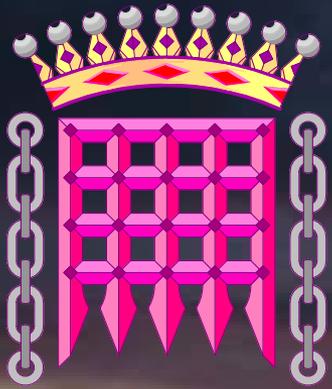


**Sir Crispin Charles
Cervantes Tickell**



1970s: global cooling

1990s: global warming



Heatwave: “global warming”:
Cold snap: “climate change”!

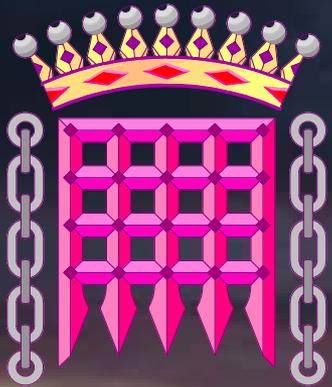


"It's too early to confirm that China is having another warm winter, but the world's 4th economy is definitely suffering the impact of global warming"

China News, February 2007

"China has a history of natural cataclysms, but this harsh winter is the latest example of increasingly extreme weather as climate change progresses".

China News, February 2008



**“Global warming”. Drier.
Or colder. Or wetter.**

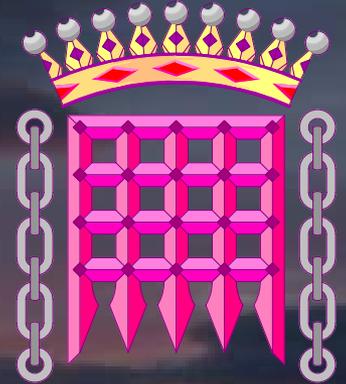
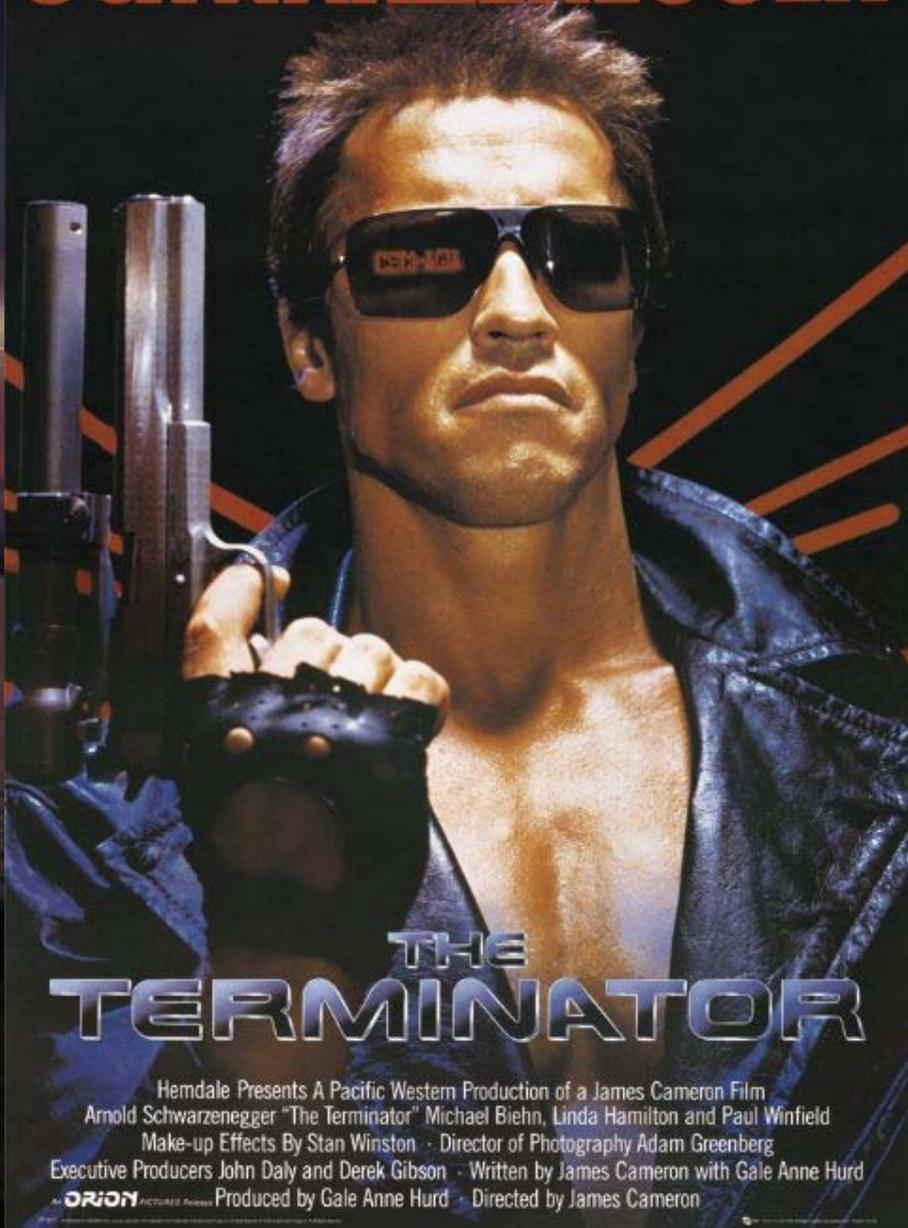
**“Global warming can mean
colder. It can mean drier. It
can mean wetter. That’s
what we’re dealing with.”**

Stephen Guilbeault, Greenpeace, 2005



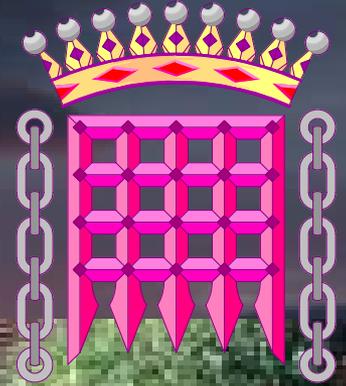
Silencing debate

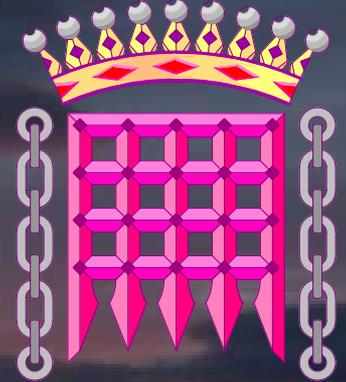
SCHWARZENEGGER



“The debate is over. The science is certain. Now we must act.”

Frost destroyed the 2007 California citrus crop

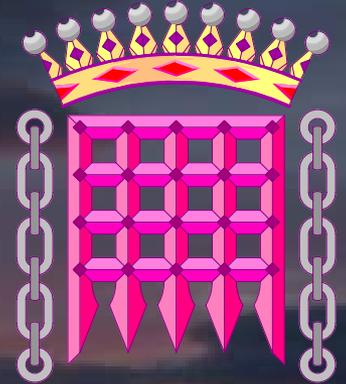




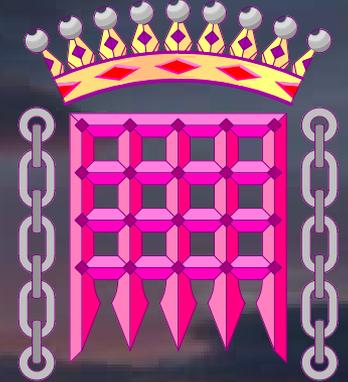
“The science is simple and settled. The debate is well and truly over”

David Miliband

Snow stopped 1,000,000 children reaching school

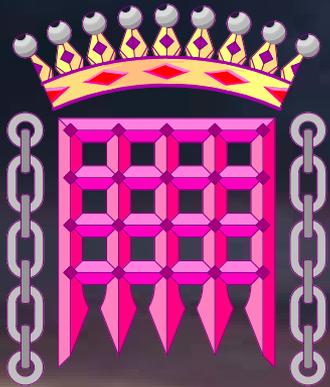


**February
2007**



**“Climate deniers,
like Islamic
terrorists, should
be denied access
to the media.”**

**Margaret Beckett
November 2006**



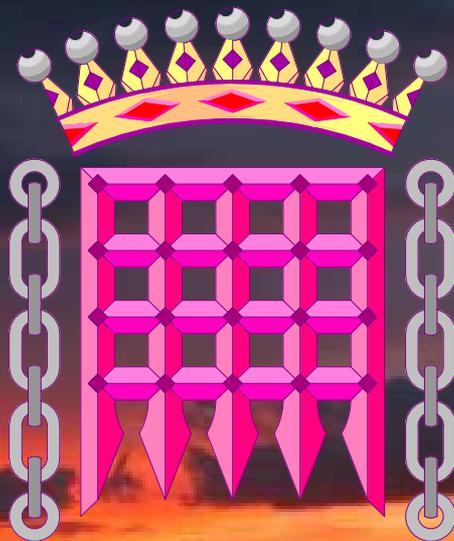
“Once we’d got one person setting the case for man-made global warming, and somebody opposing it, ... the viewer is probably left with the impression that there’s equal weight to these arguments.



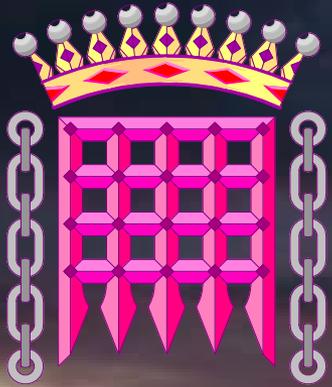
And I think that we have now moved on in our coverage of it.

There is now a dwindling band of scientists who don’t accept that there is man-made global warming.”

Fran Unsworth, Head of News-gathering, BBC, November 2006



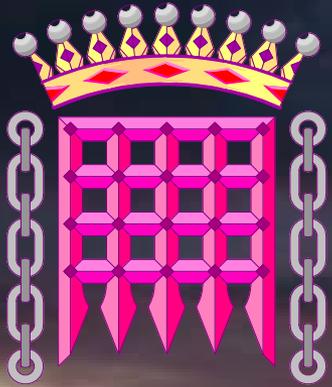
**Is the IPCC
honest?**



BEFORE (#1)

“None of the studies cited above has shown clear evidence that we can attribute the observed [climate] changes to the specific cause of increases in greenhouse gases.”

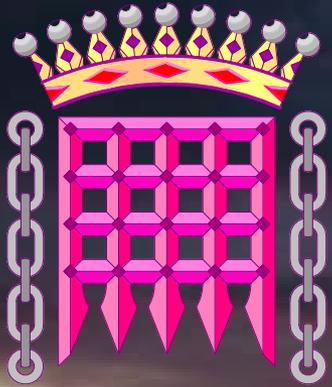
IPCC (1995)



BEFORE (#2)

“No study to date has positively attributed all or part [of observed climate change] to anthropogenic causes.”

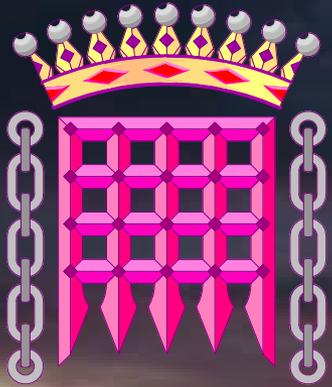
IPCC (1995)



BEFORE (#3)

“While none of these studies has specifically considered the attribution issue, they often draw some attribution conclusions, for which there is little justification.”

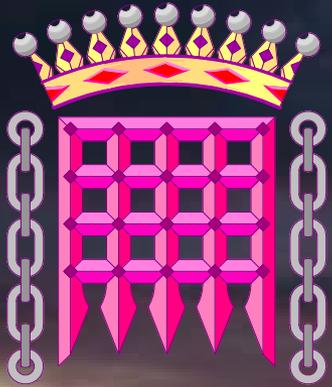
IPCC (1995)



BEFORE (#4)

“Any claims of positive detection of significant climate change are likely to remain controversial until uncertainties in the total natural variability of the climate system are reduced.”

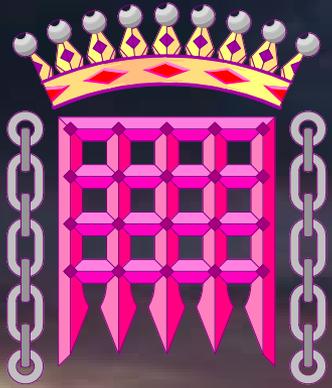
IPCC (1995)



BEFORE (#5)

“When will an anthropogenic effect on climate be identified? It is not surprising that the best answer to this question is, ‘We do not know.’

IPCC (1995)

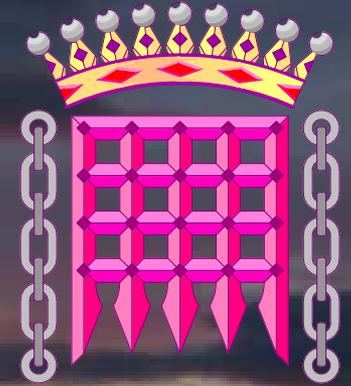


AFTER:

“The body of ... evidence now points to a discernible human influence on global climate.”

IPCC (1995) rewrite

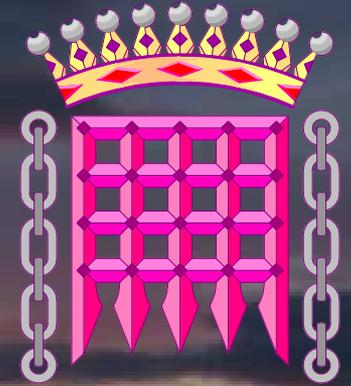
IPCC bars scientists who reject alarmism



**“The IPCC
did not tell
the truth.”**

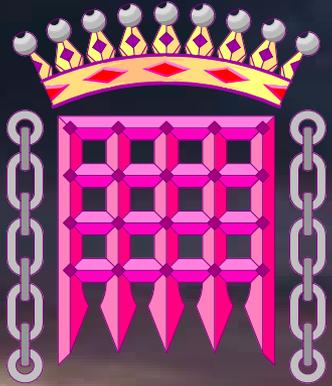
Paul Reiter

IPCC officials take alarmist platforms



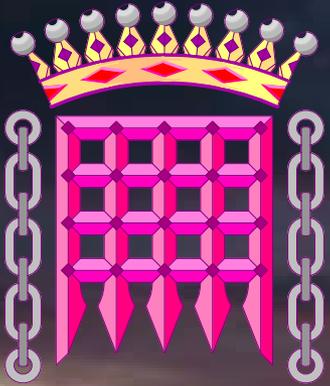
“I have come to view the part of the IPCC to which my expertise is relevant as having become politicized.”

Chris Landsea



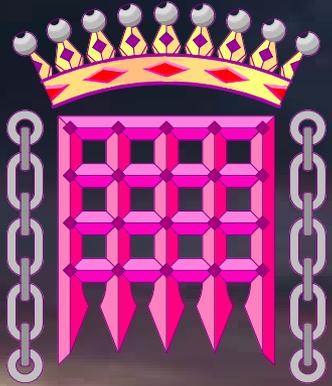
IPCC peer review? What peer review?

Authors of IPCC (2007), Ch. 9:	53
“Peer-reviewers”:	60
% of comments rejected:	53%
Proper peer review?	No
Did 2,500 scientists check it?	No



IPCC manipulates 4 decimal points

	<i>Metres per century</i>	1961-2003	1993-2003
1.	Thermosteric expansion	0.042	0.160
2.	Glaciers and ice-caps	0.050	0.077
3.	Greenland ice-sheets	0.050	0.210
4.	Antarctic ice-sheets	0.140	0.210
5.	IPCC's sum of lines 1-4:	0.110	0.280



IPCC exaggerates CO₂ effect 20-fold

“The CO₂ radiative forcing increased by 20% during the last 10 years (1995-2005).”

IPCC (2007)

Fact: 1995 concentration 360 ppmv

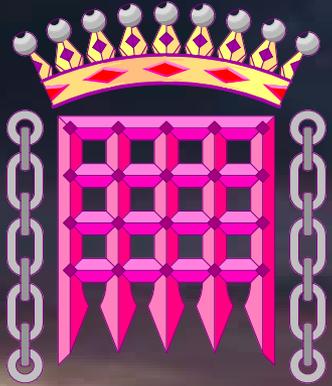
2005 concentration 378 ppmv (+5%)

Forcing rose $535 \ln(378/360) / 27\%$ (<1%)

Total CO₂ forcing is 27 W m^{-2} (Kiehl & Trenberth, 2007)



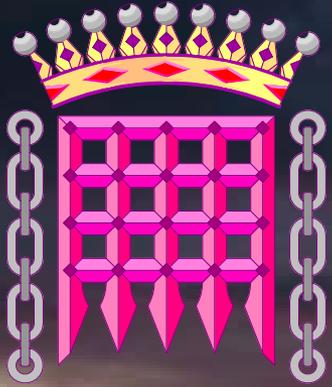
The unreported science



**Why did the media
not report this? #1**

**“Greenhouse-gas-induced
climate change ... currently
cannot be distinguished
from natural climate
variability.”**

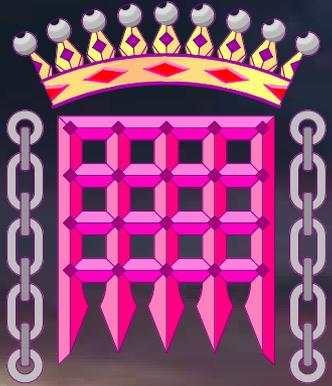
Fernau et al., 1993



Why did the media not report this? #2

“... the undoubtedly over-emphasized contribution of the greenhouse effect to the global climate change.”

Kondratyev & Varotsos (1996)



Why did the media not report this? #3

“Although politicians offer simplistic remedies, such as the Kyoto Protocol, global climate continues to change naturally.”

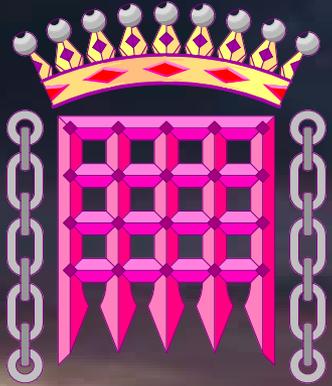
Gerhard (2004)



Why did the media not report this? #4

“‘Dangerous’ climate change is a concept contested not only among scientists and policymakers, but among the American public as well.”

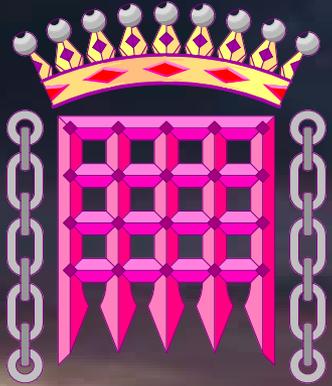
Leiserowitz (2005)



Why did the media not report this? #5

**This research invokes ... a hypothesis
that internal processes in the oceans
rather than in the atmosphere are at
the center of global warming.”**

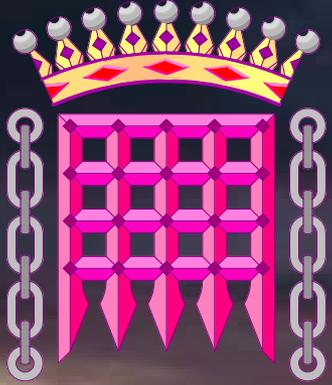
Lai et al., (2005)



Why did the media not report this? #6

“The 20th-century contribution of anthropogenic greenhouse gases and aerosol remains insecure.”

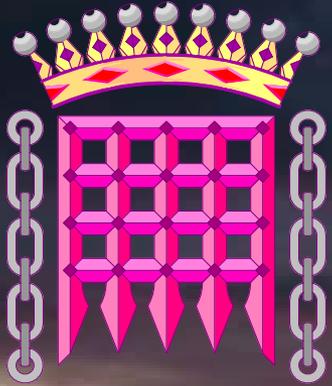
Buentgen *et al.* (2006)



**Why did the media
not report this? #7**

**“Human-induced
climatic changes
are negligible.”**

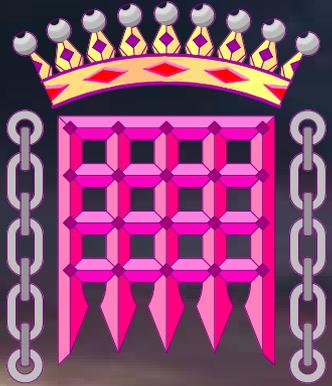
Khilyuk and Chilingar (2006)



Why did the media not report this? #8

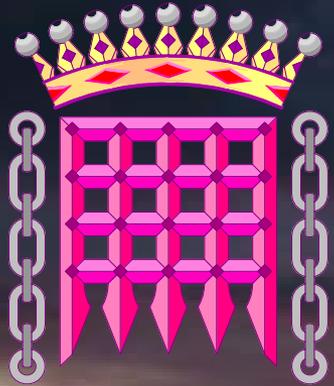
“The CO₂ greenhouse effect on global climate change ... could have been excessively exaggerated. It is high time to re-consider the trend of global climate changes.”

Zhen-Shan and Xian (2007)



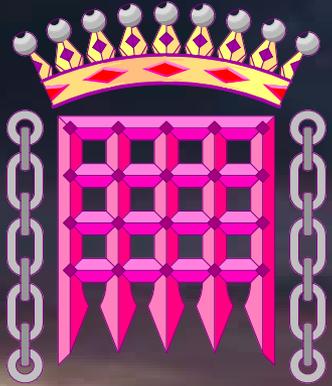
**Why did the media
not report this? #9**

**“Climate has always
varied on all time-scales,
so the observed change
may be natural.”**



**Because the truth
is not sensational**

**“Climate has always
varied on all time-scales,
so the observed change
may be natural.” IPCC (2001)**



The consensus: DON'T PANIC!

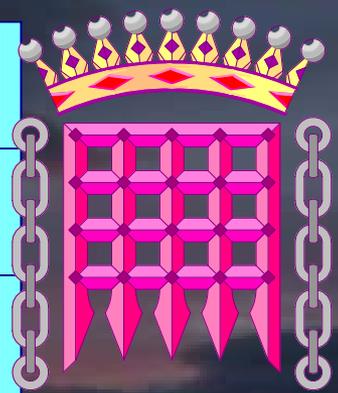
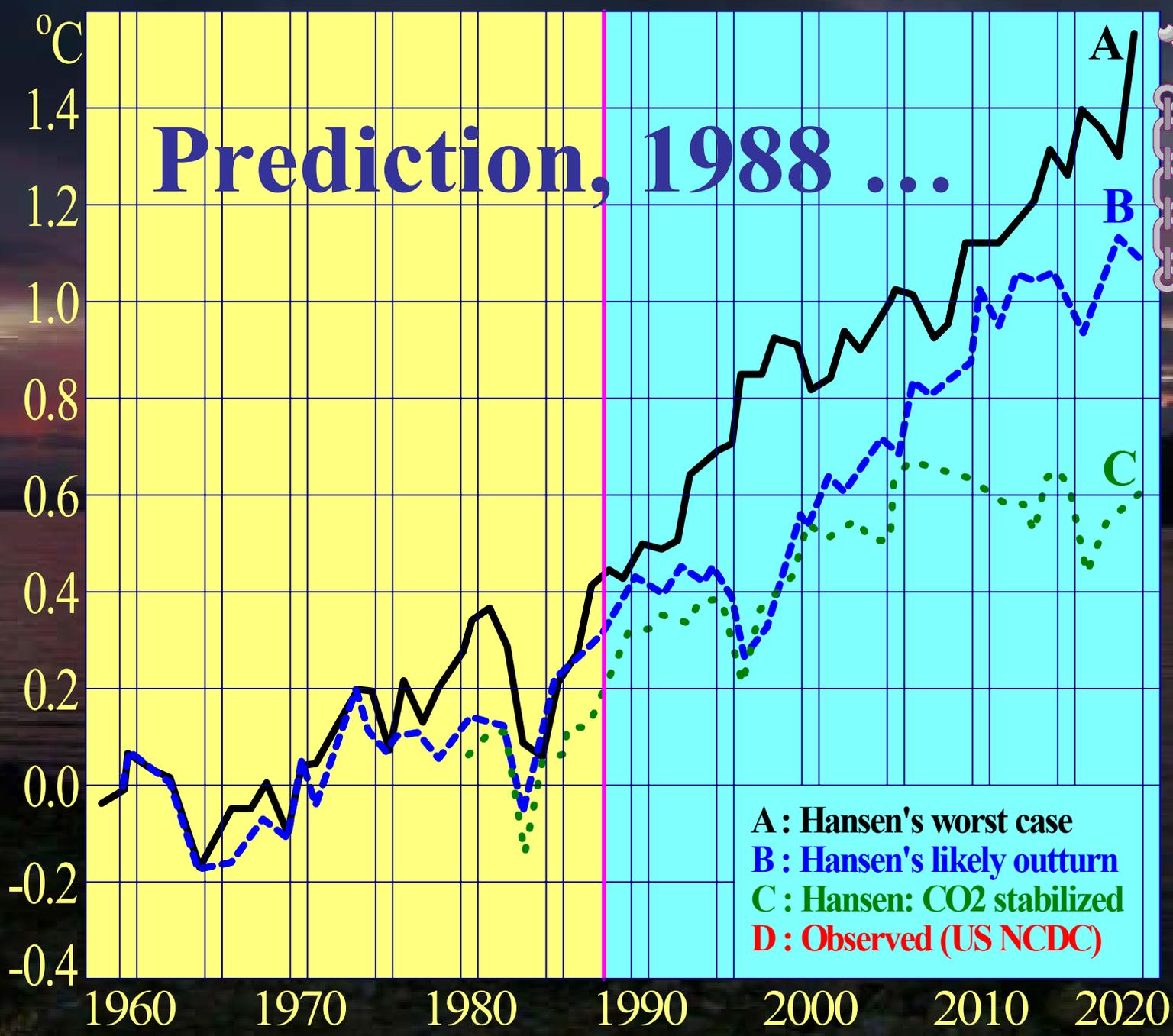
Learned papers reviewed: 539

Climate “catastrophe”: 1

Schulte (2008: in press)

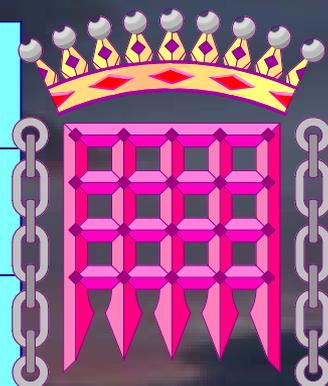
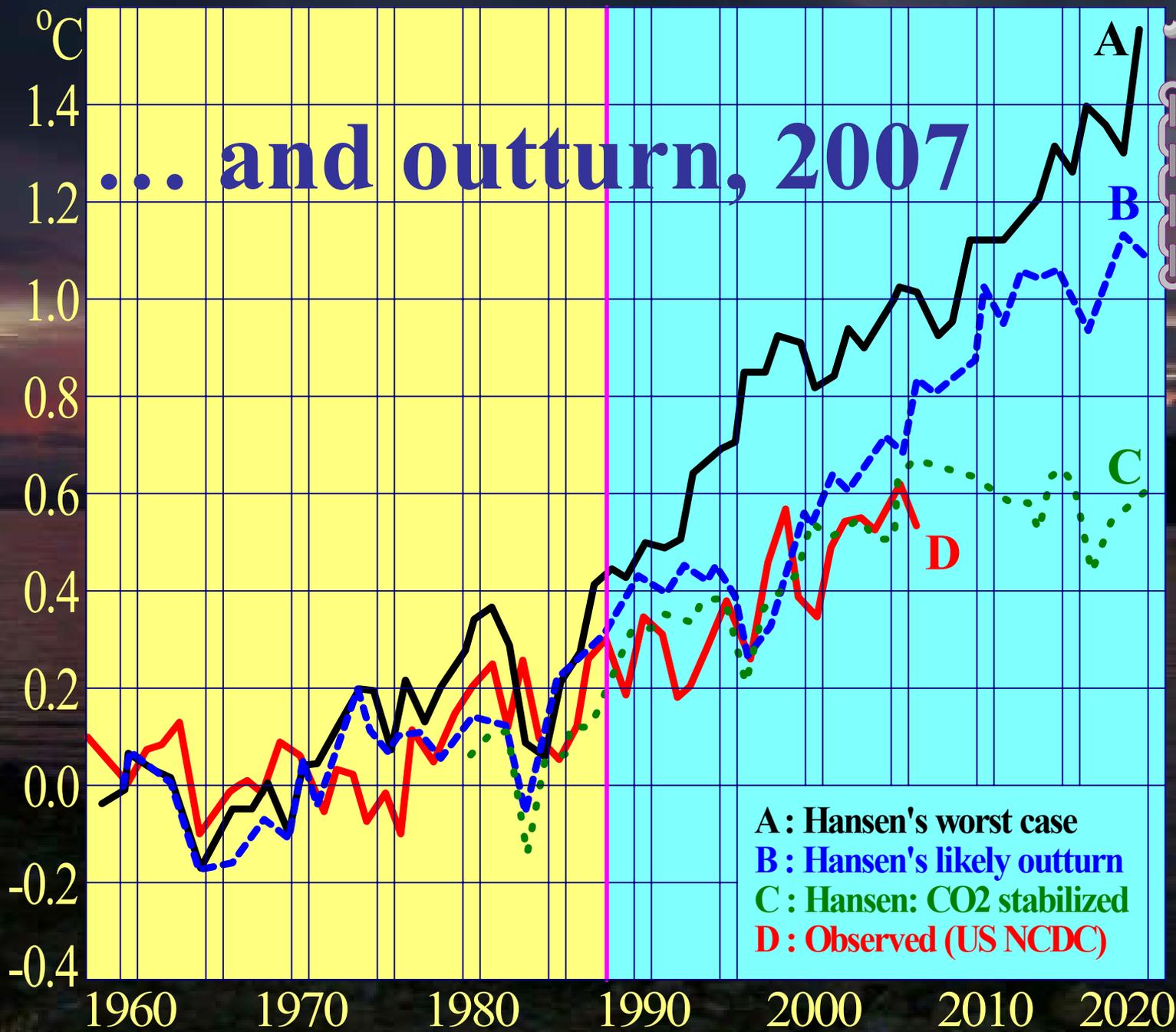


Historical perspective



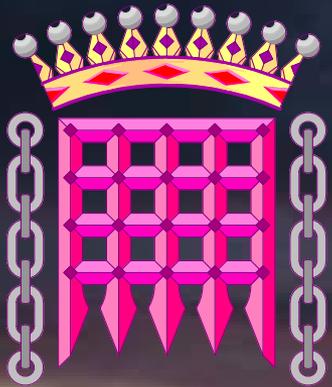
**The
graph
that
started
the
scare**

**Hansen
(1988)**



OOPS!

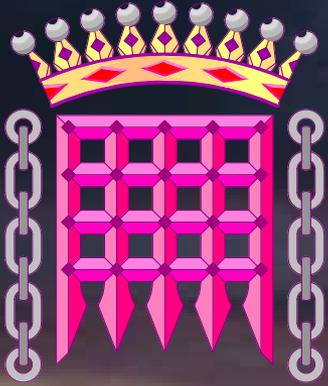
**Hansen
(1988);
NCDC
(2007)**



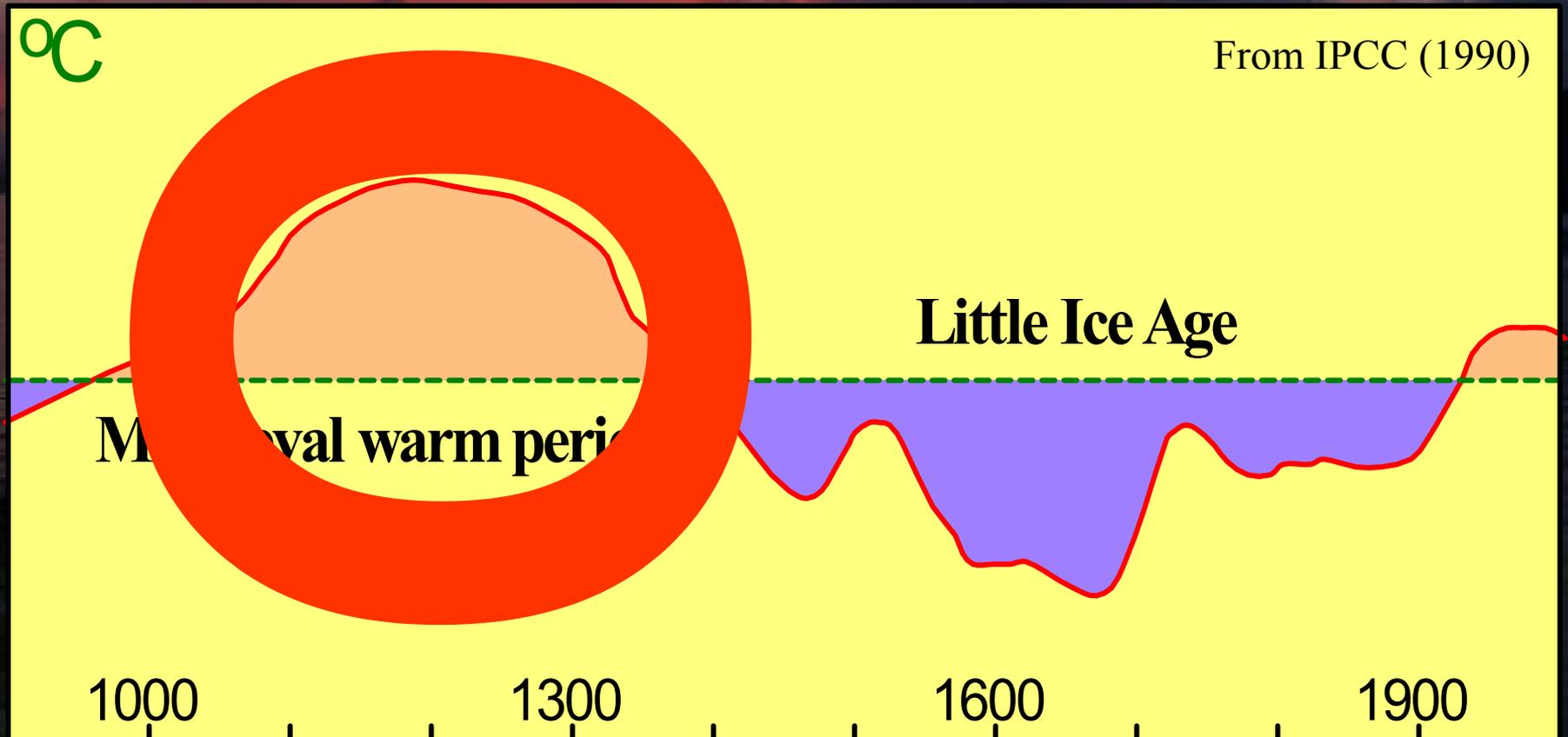
How IPCC got rid of the Mediaeval Warm Period

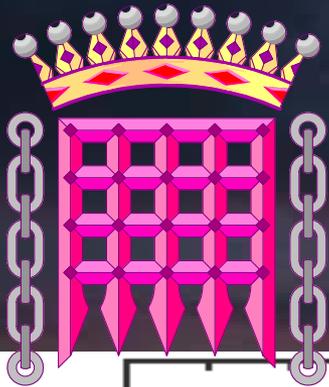
“A major person working in the area of climate change and global warming sent me an astonishing email that said, ‘We have to get rid of the Mediaeval Warm Period.’”

David Deming, 2005

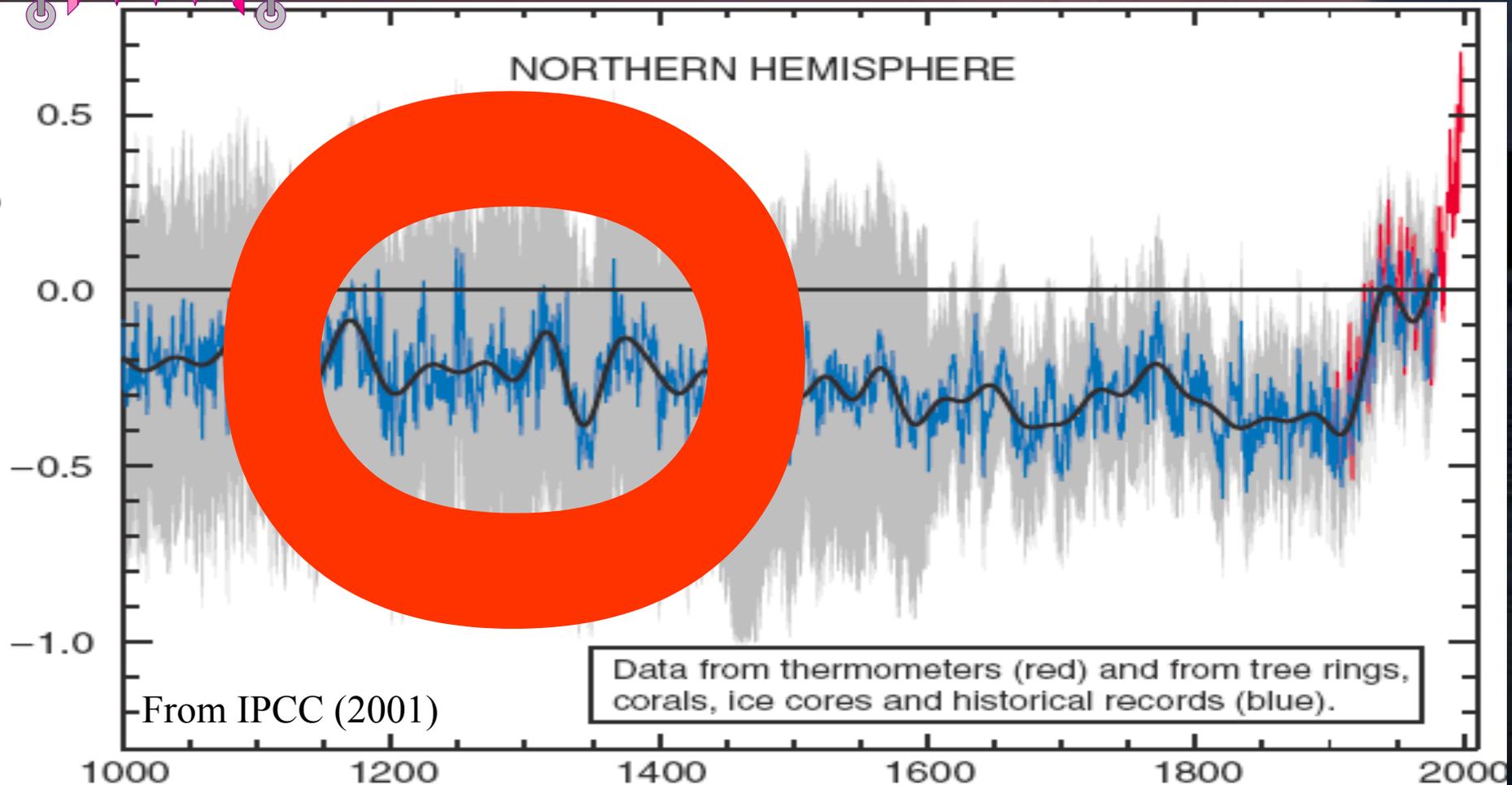


Now you see it ...





... now you don't!

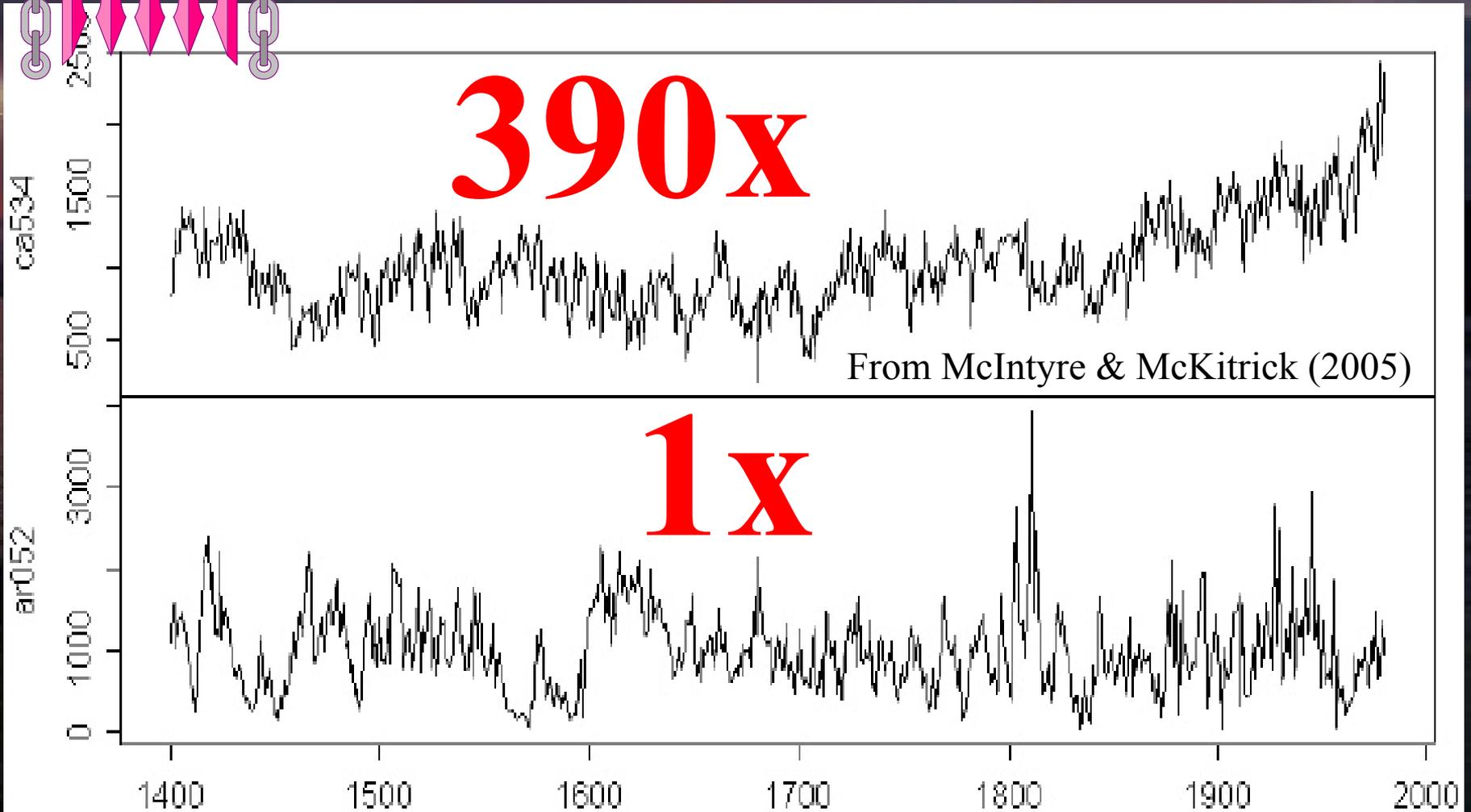


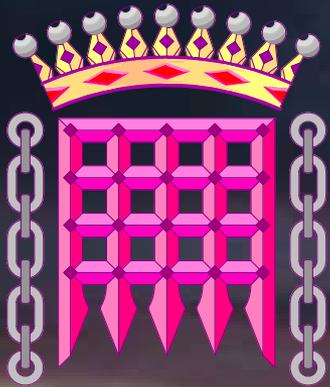
How the IPCC bent the “hockey stick”

390x

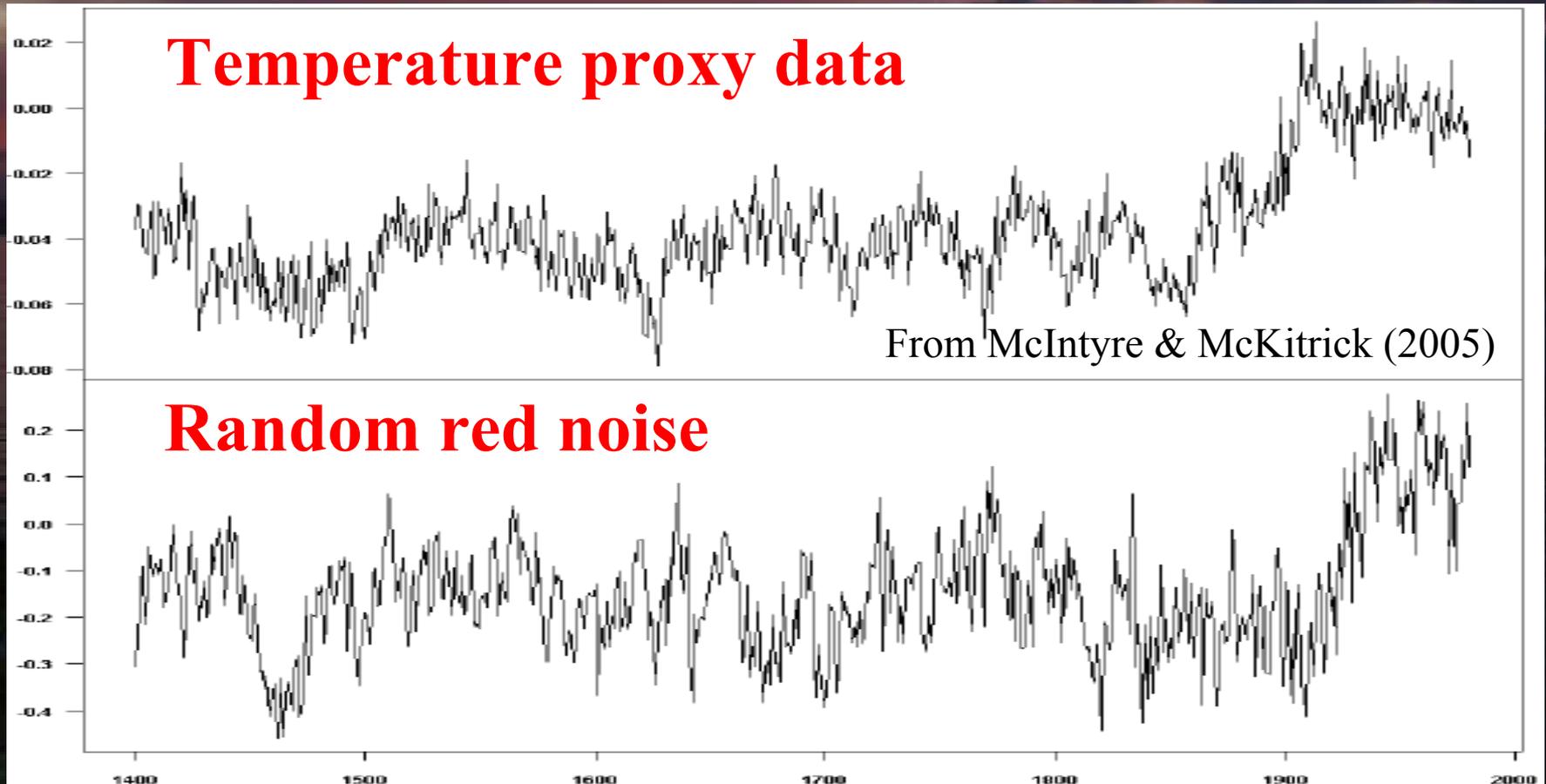
From McIntyre & McKittrick (2005)

1x



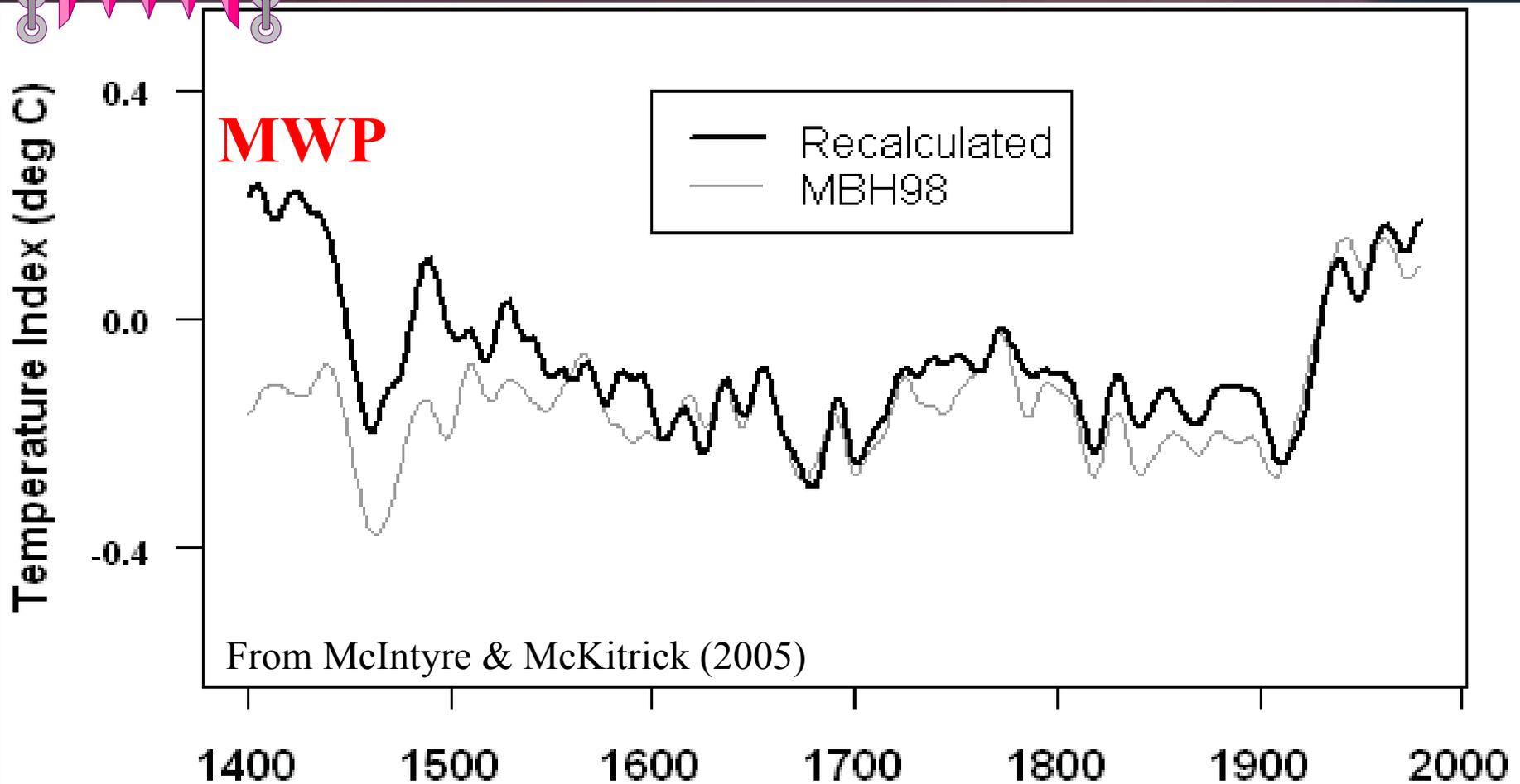


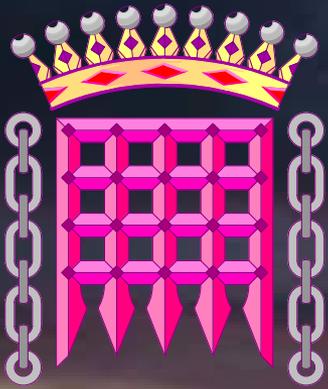
The computer always drew hockey sticks





“CENSORED_DATA” (and MWP) restored



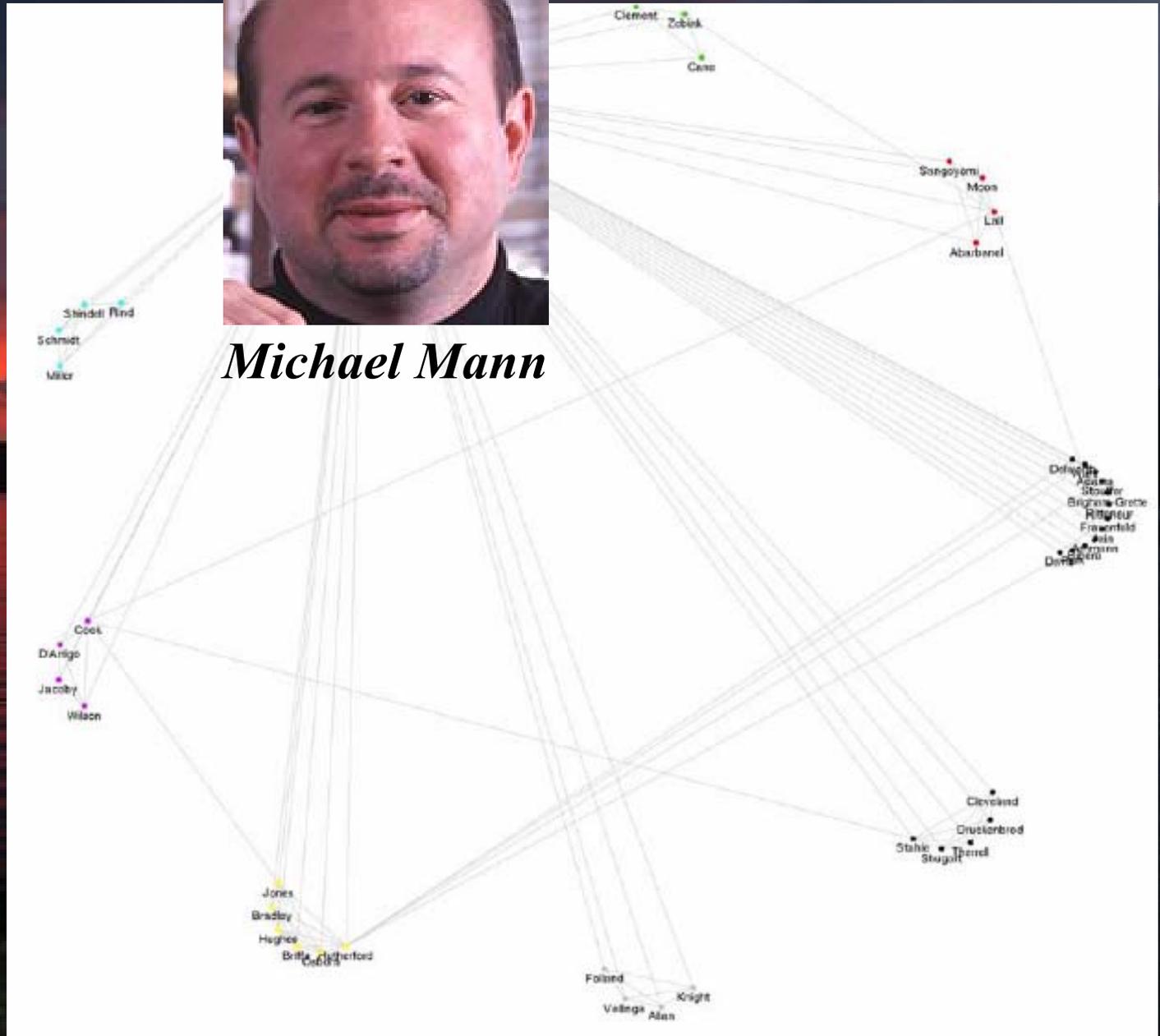


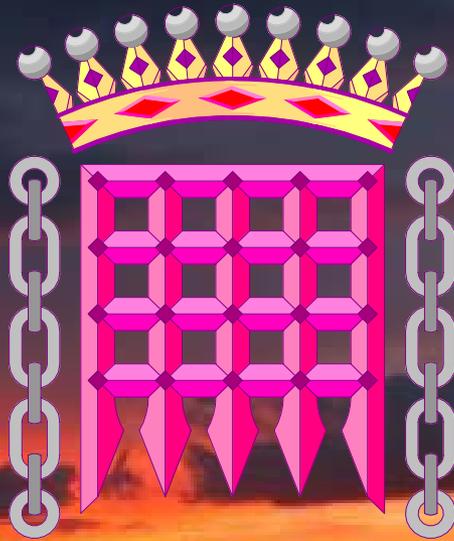
A pally palaeo- climate social network

Wegman
et al. (2005)



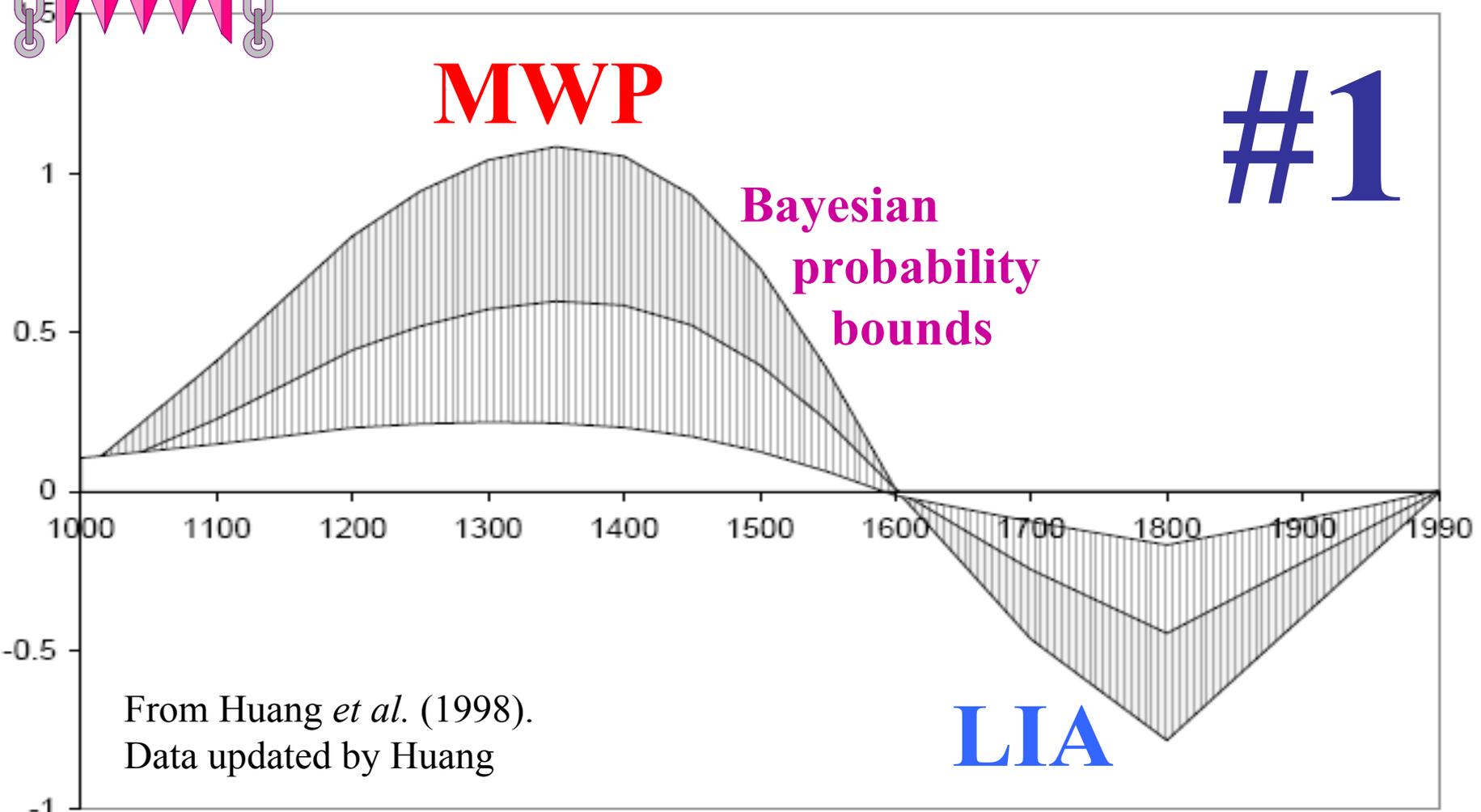
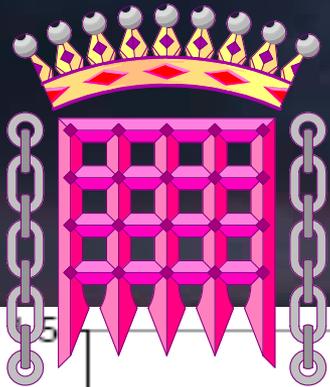
Michael Mann

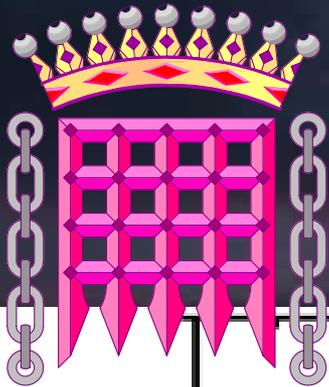




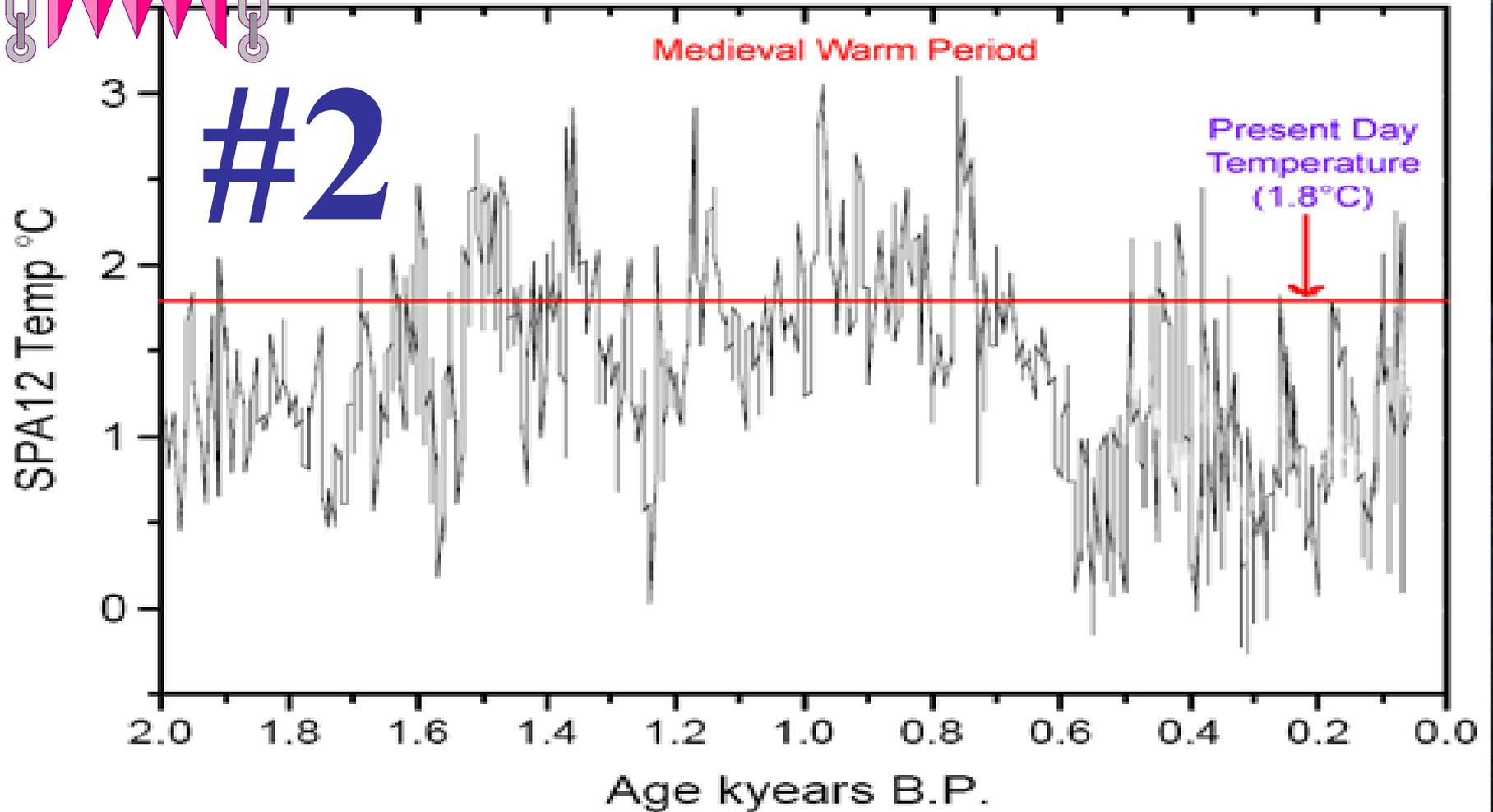
**Middle Ages
were warmer**

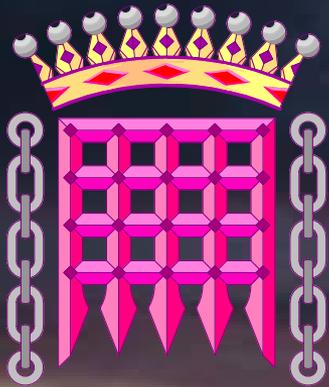
Temperatures from 6000 boreholes worldwide



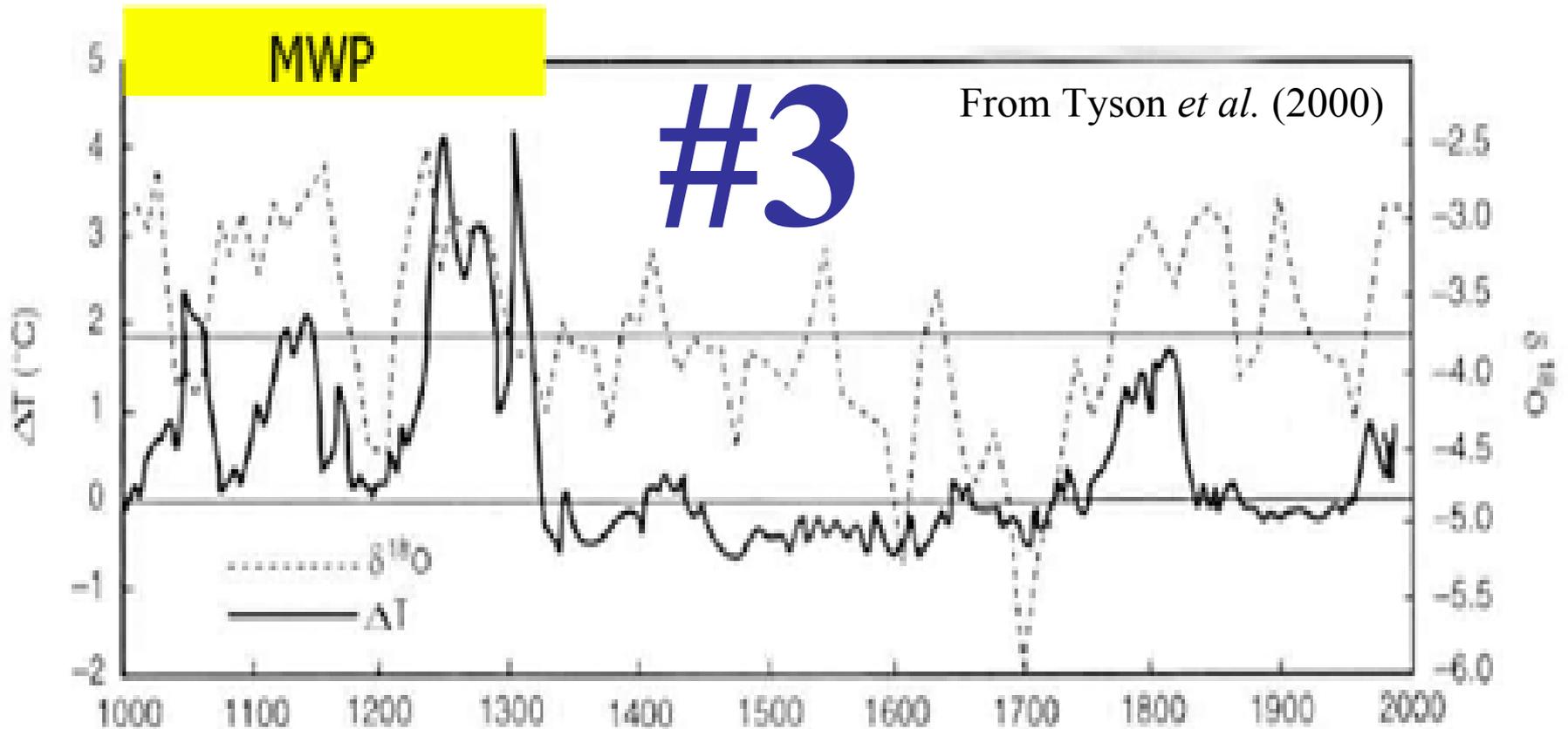


Stalagmite, Spannagel Cave, Austrian Alps





Stalagmite, Cold Air Cave, Makapansgat Valley, SA

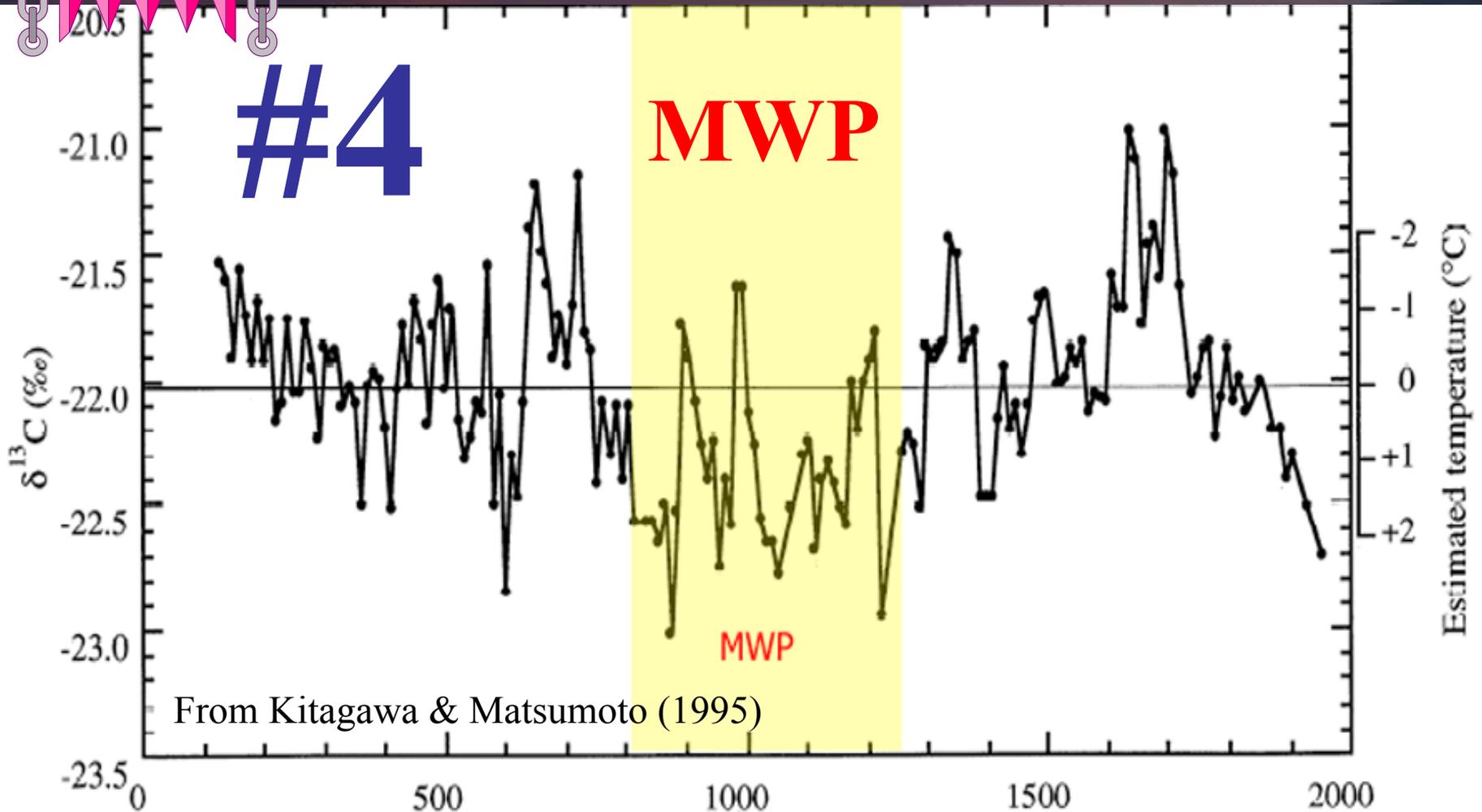


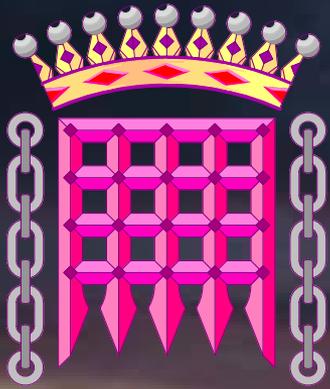


Japanese cedars from Makushima Is., S. Japan

#4

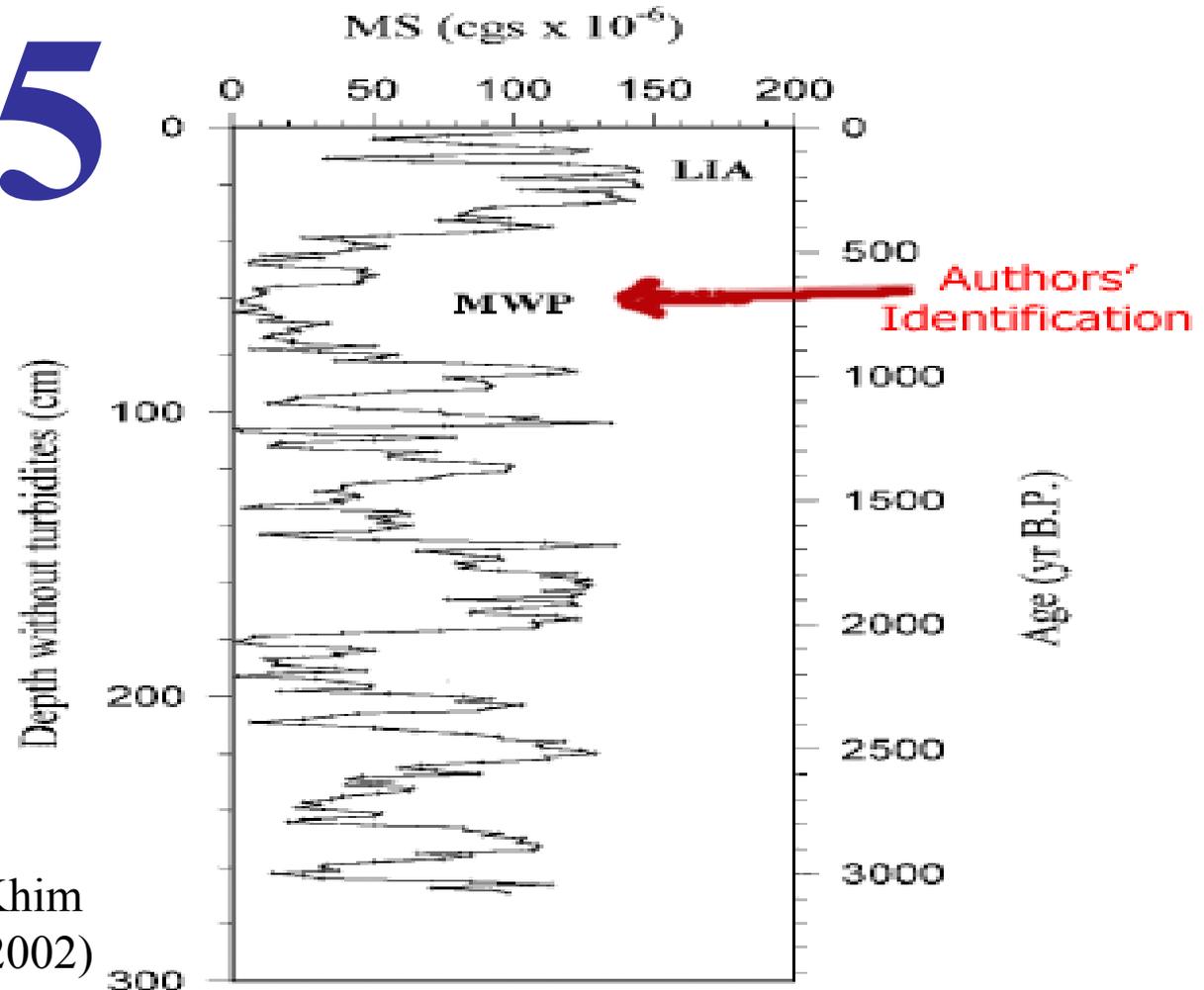
MWP





Sediments, E. Bransfield Basin, Antarctic peninsula

#5

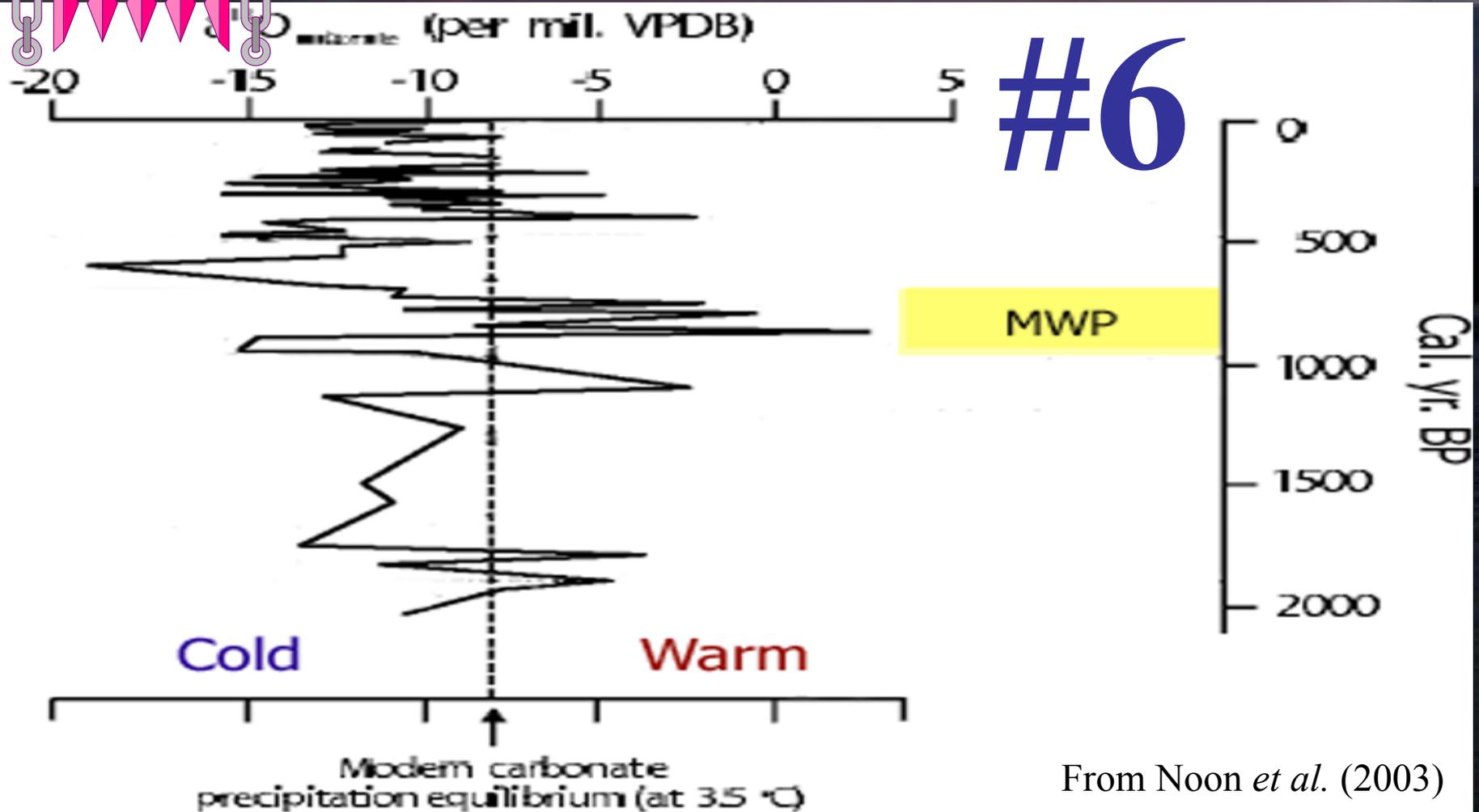


From Khim
et al. (2002)

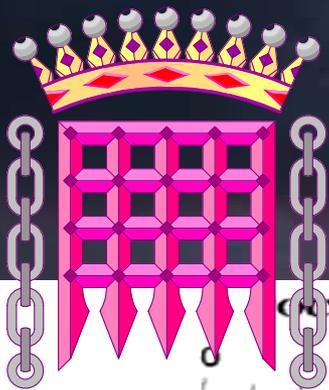


Sediments, Sombre Lake, Signy Island, Antarctica

#6

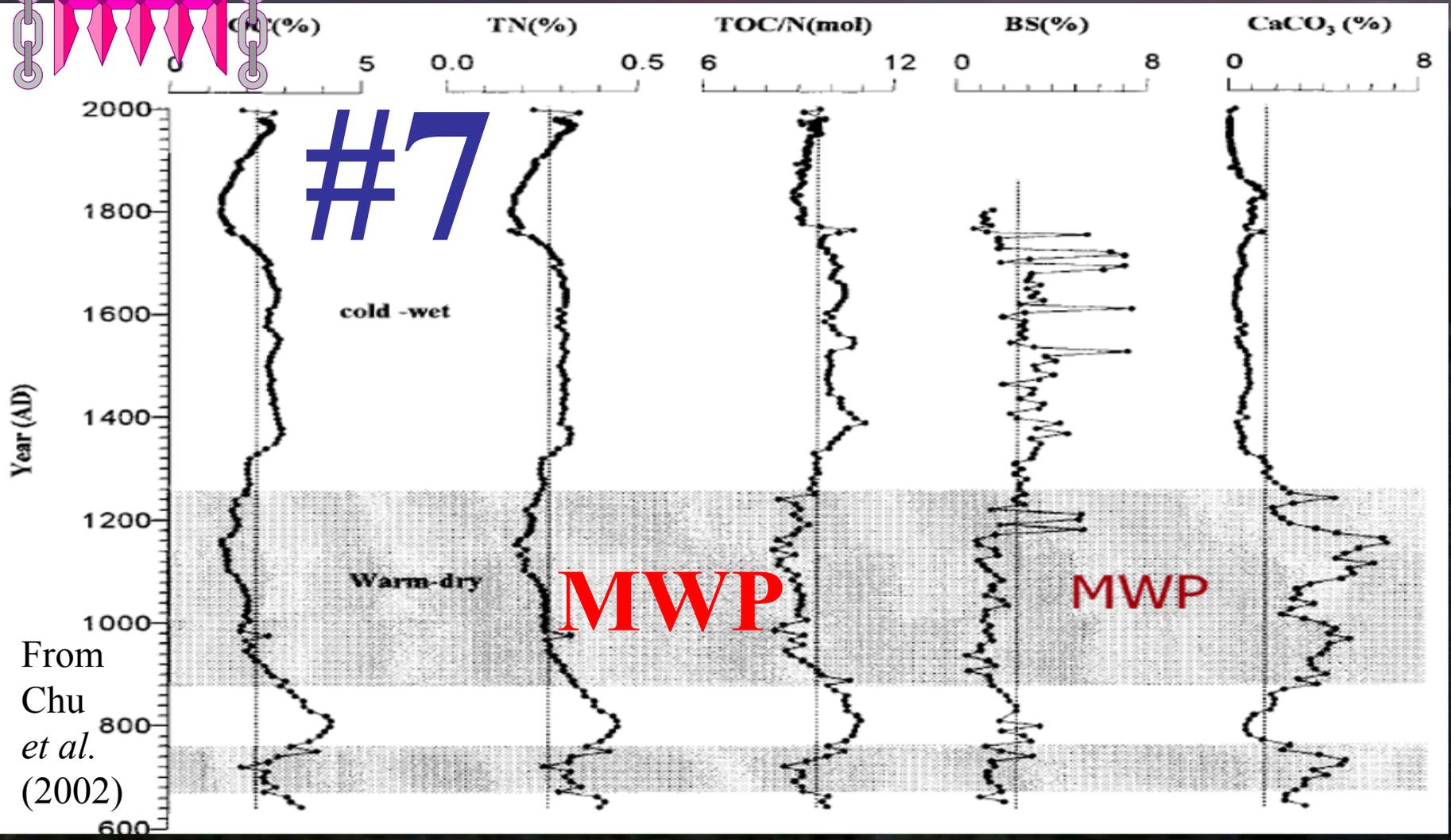


From Noon *et al.* (2003)

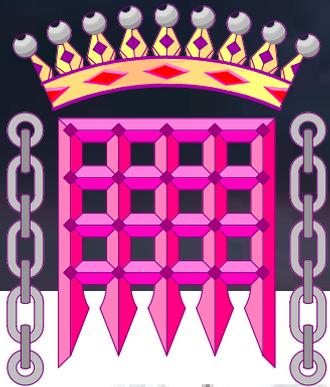


Sediments, L. Huguangyan, Leechow peninsula, S. China

#7



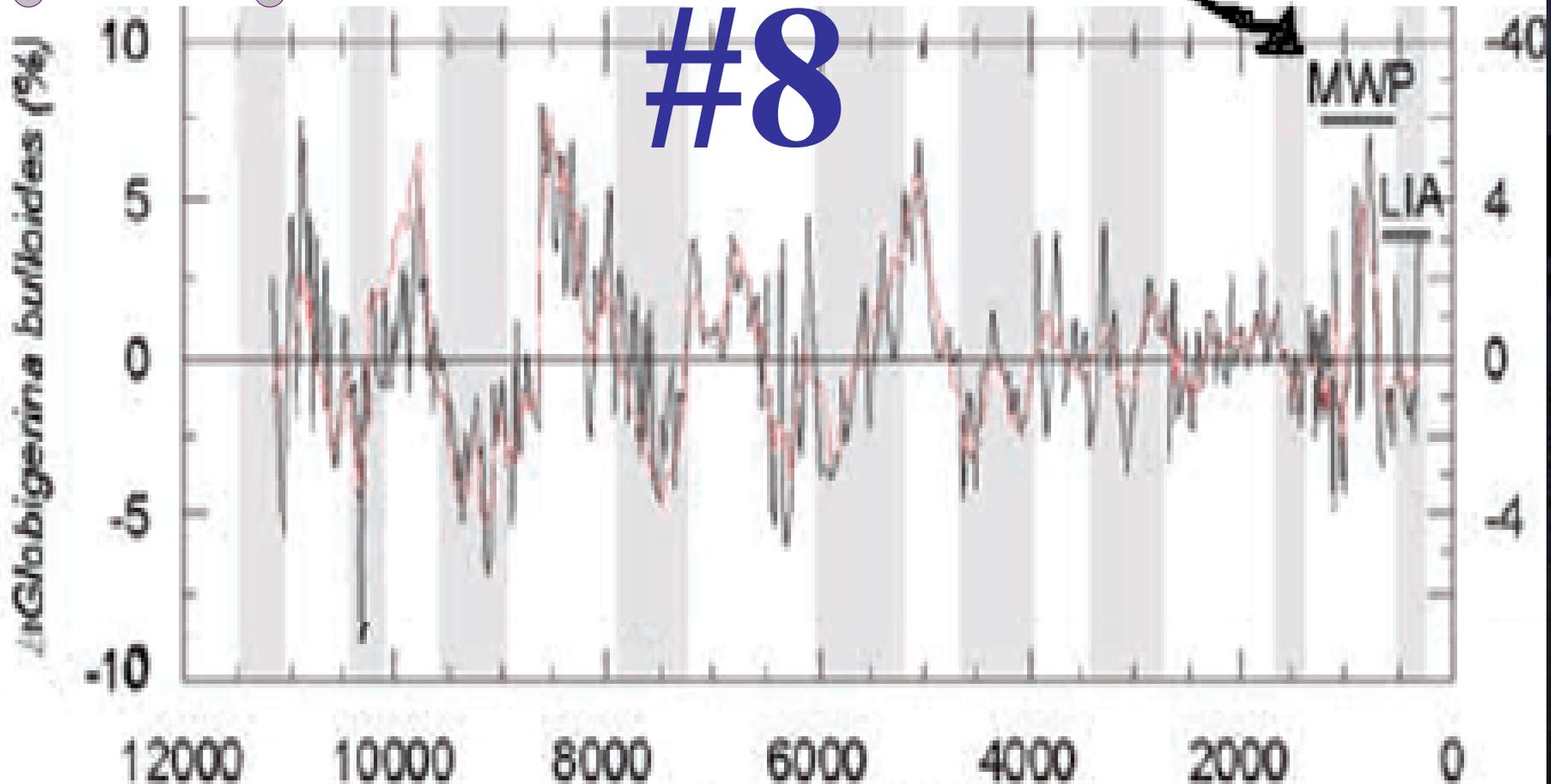
From
Chu
et al.
(2002)



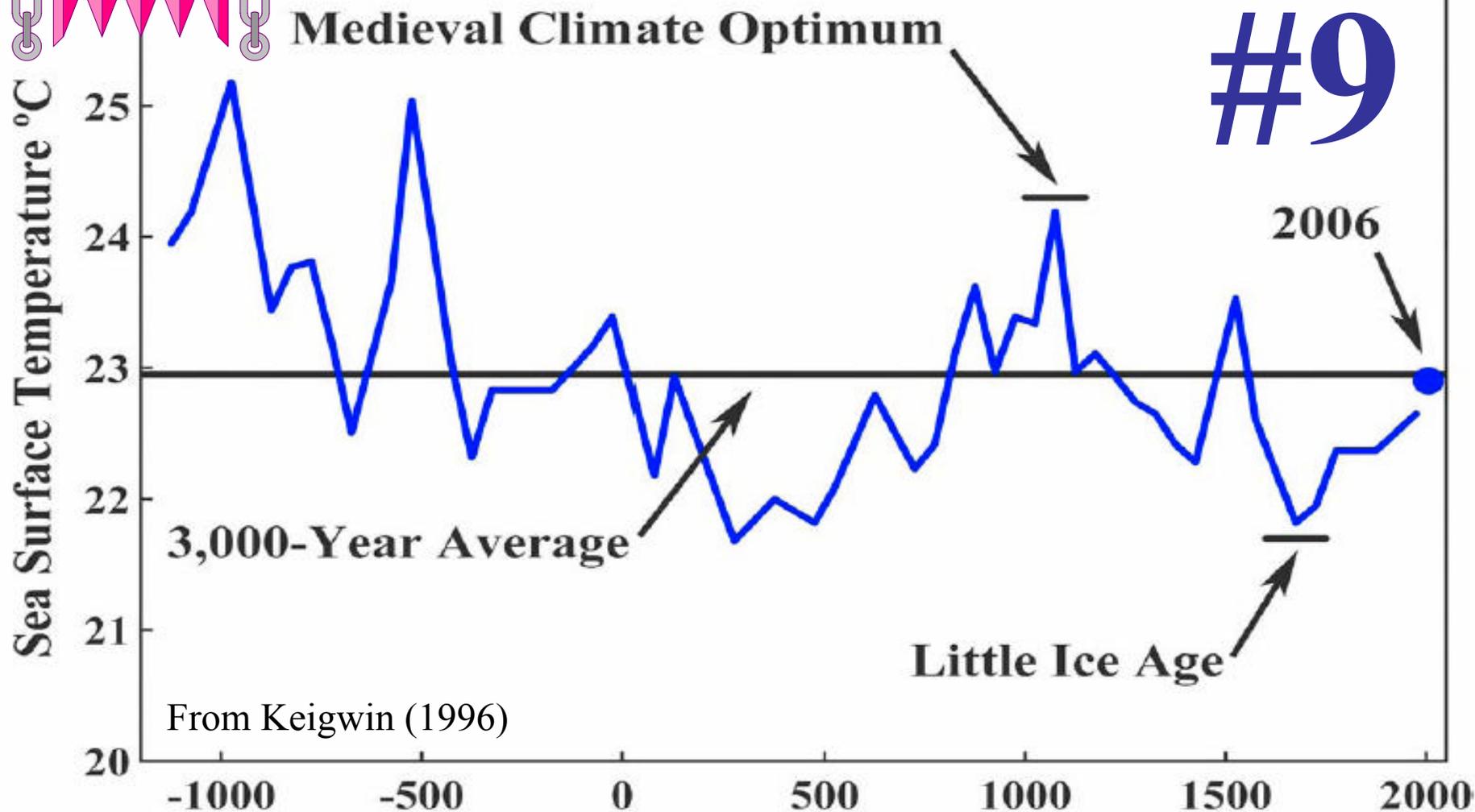
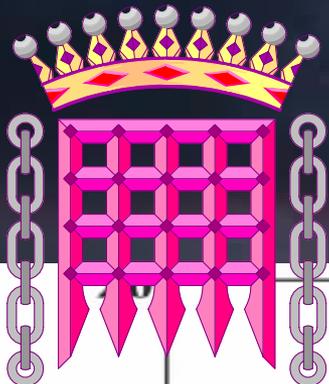
Foraminifera from the NW Arabian Sea, Oman

From Gupta *et al.* (2005)

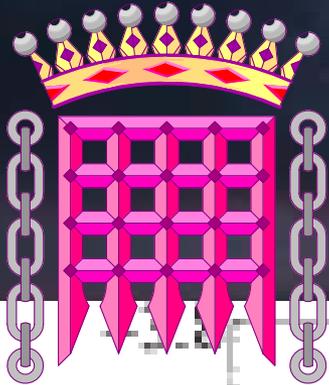
Authors' Identification of MWP



Surface temp., Sargasso Sea, 1200 BC to 2006 AD

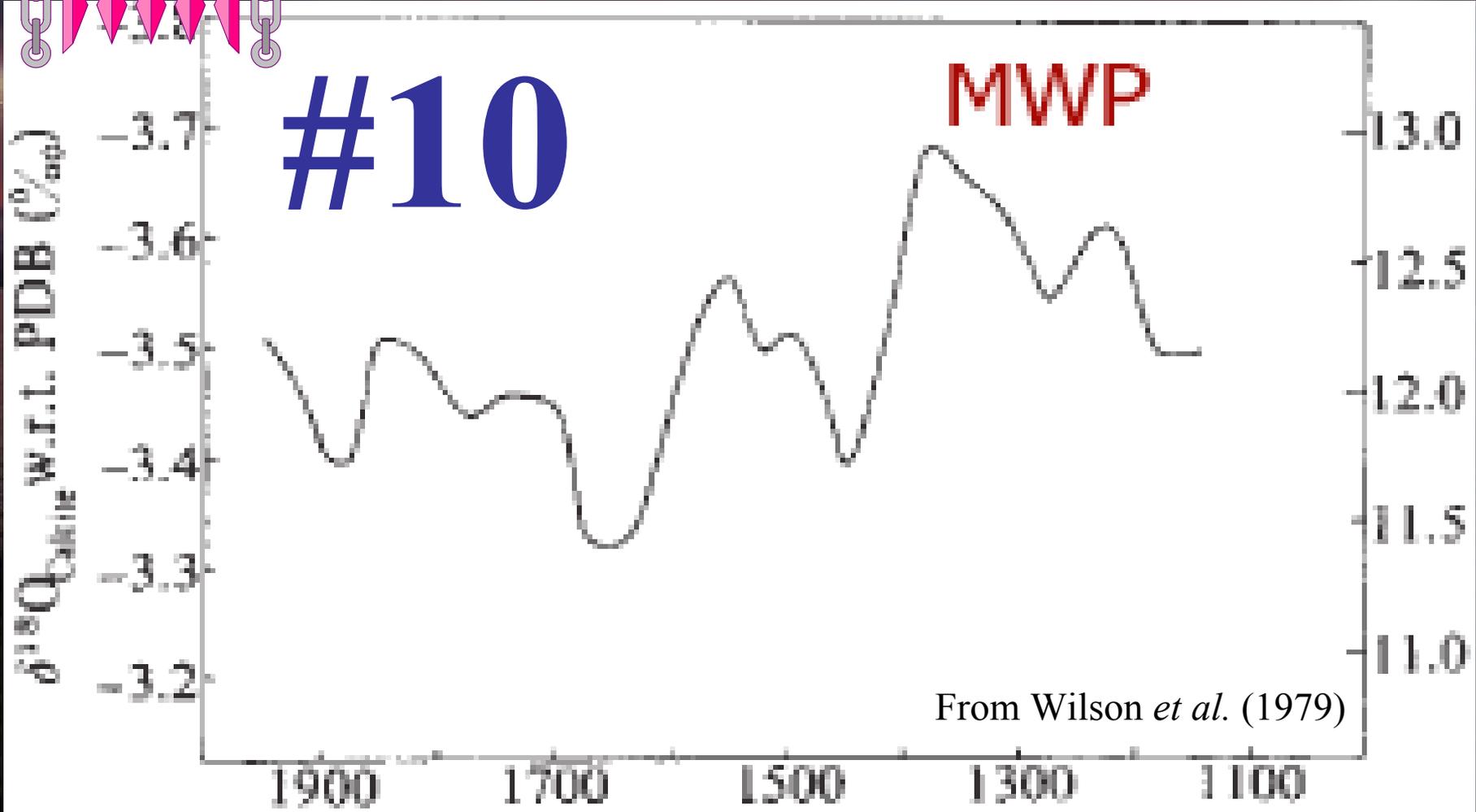


Stalagmite from a cave in New Zealand



#10

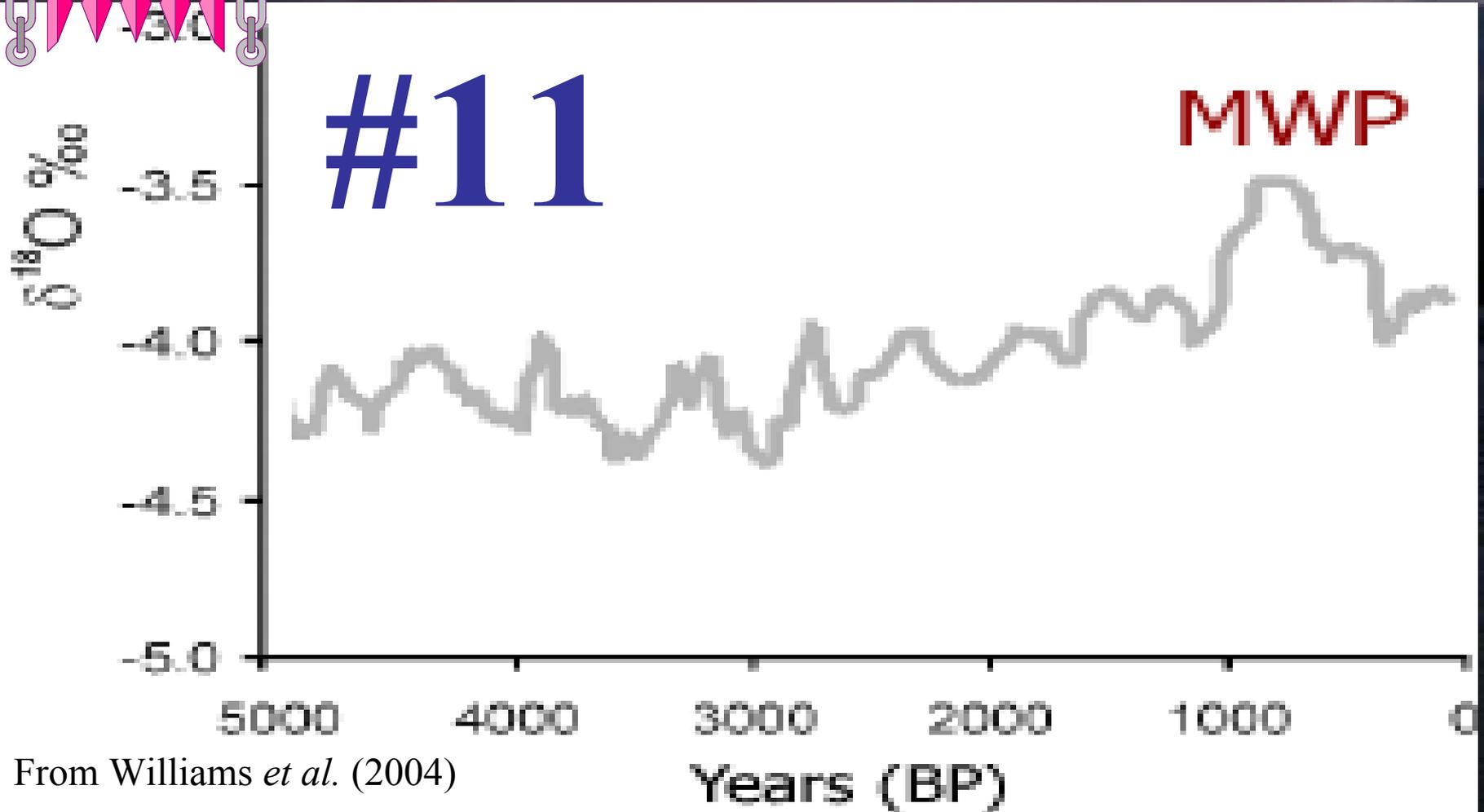
MWP



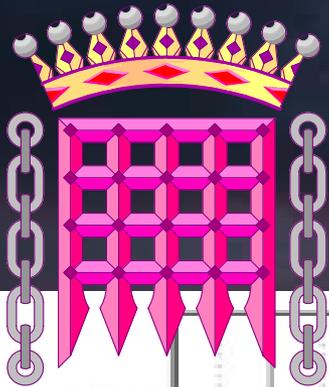
From Wilson *et al.* (1979)



Stalagmites from 4 caves, Waitomo, N. Island, NZ

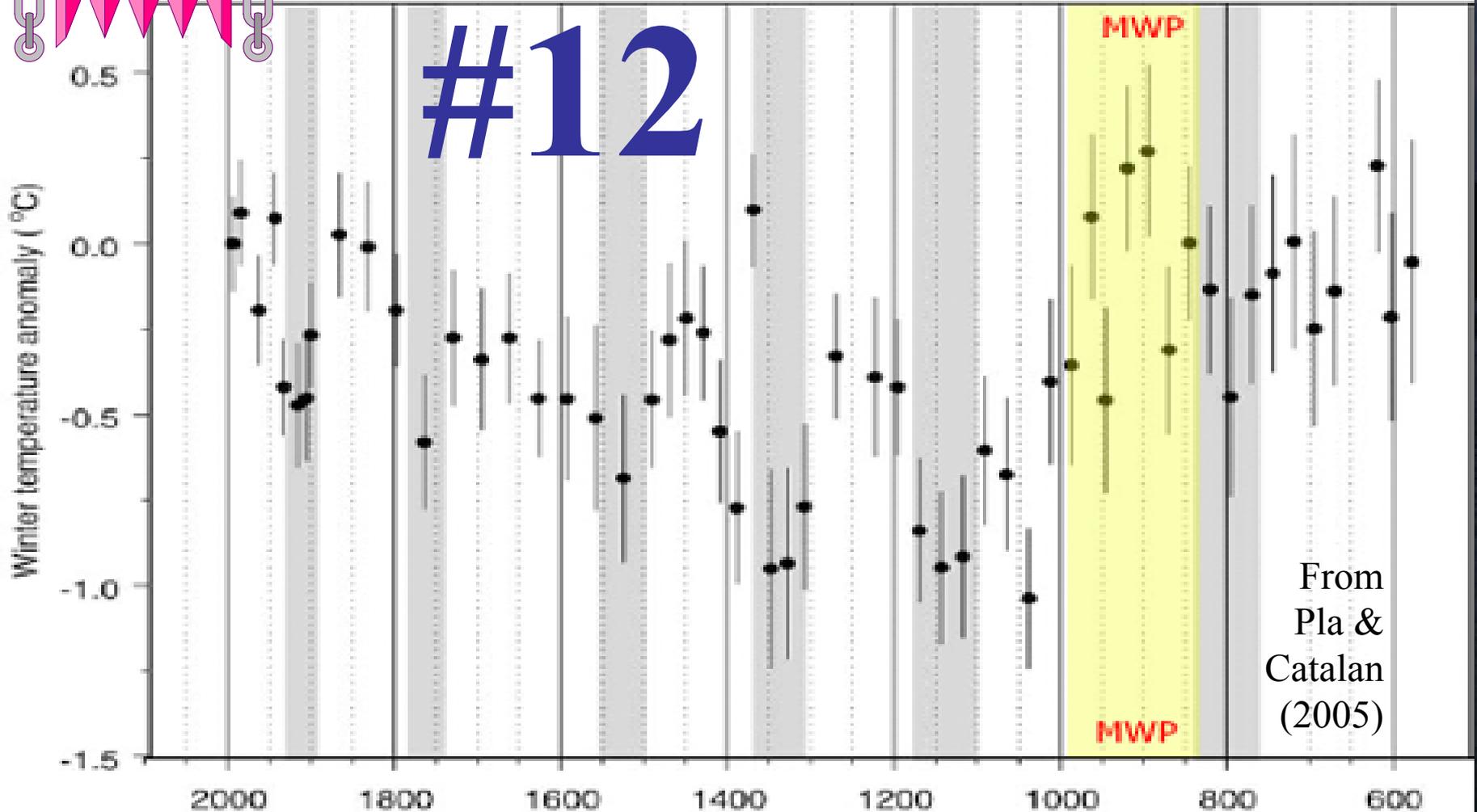


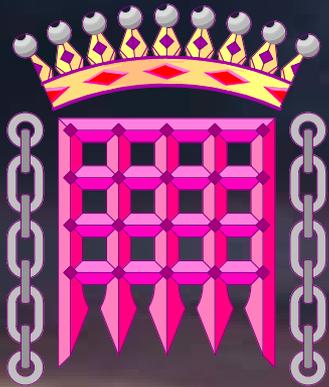
From Williams *et al.* (2004)



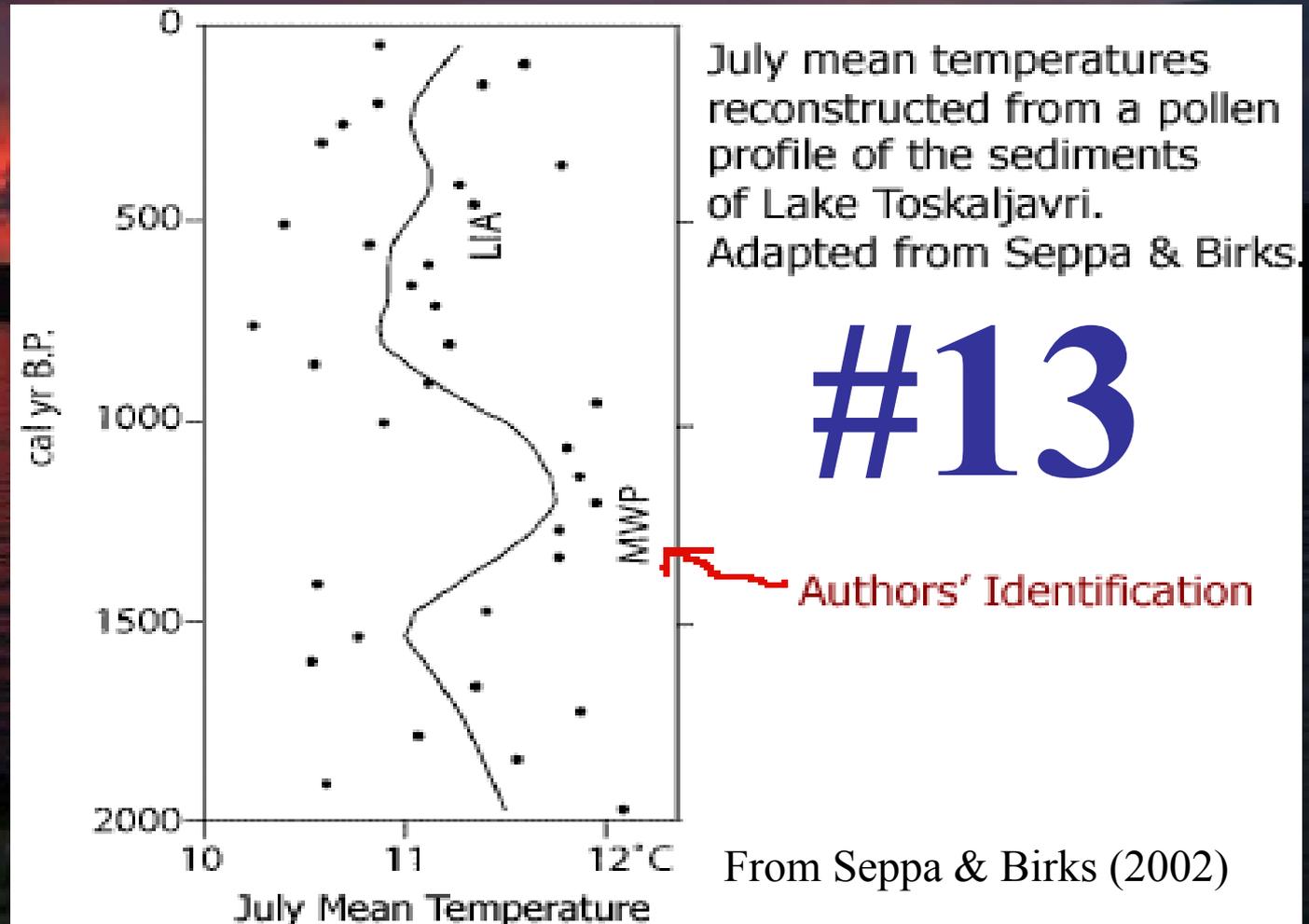
Sediment core, L. Redon, Spanish Pyrenees

#12



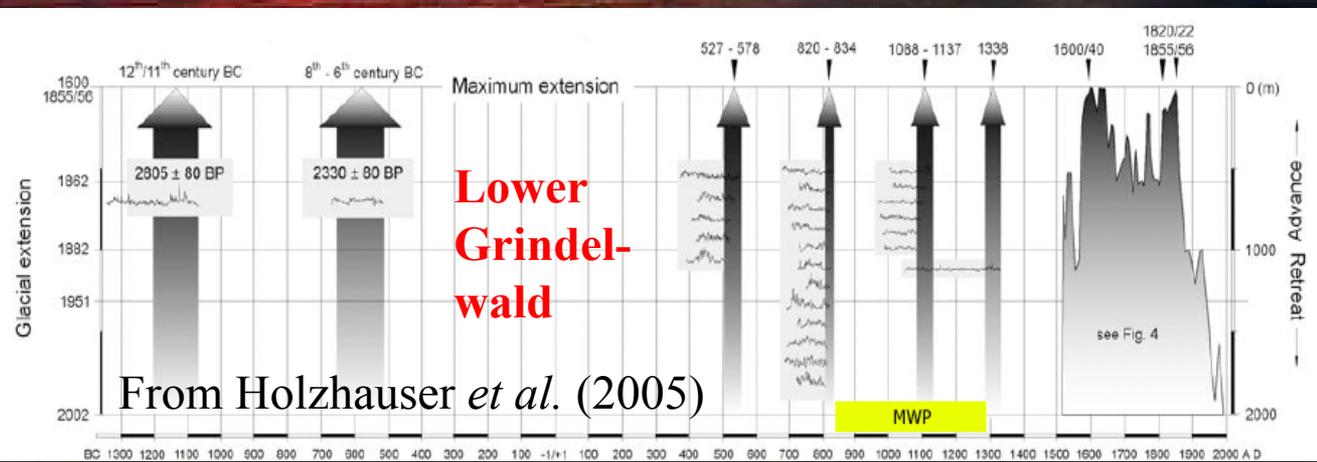
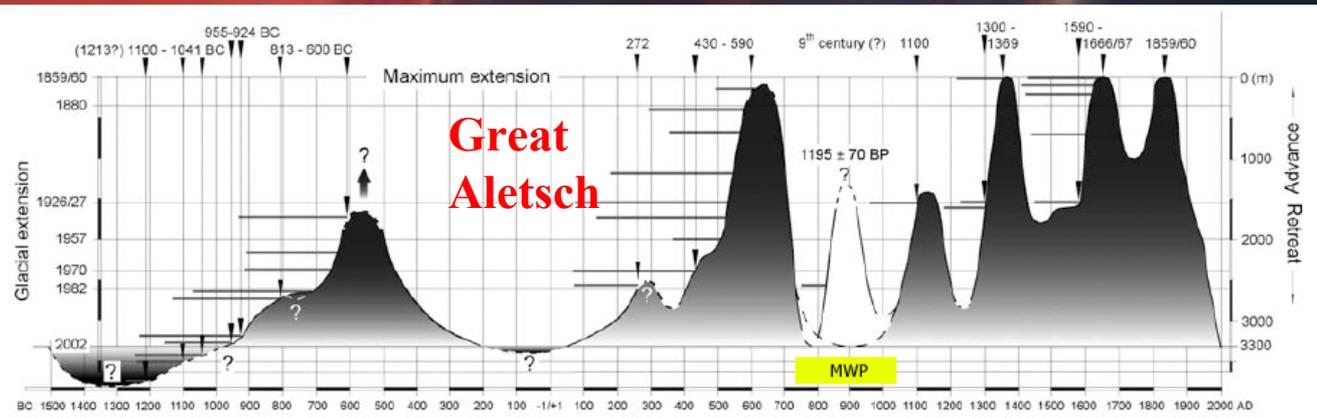
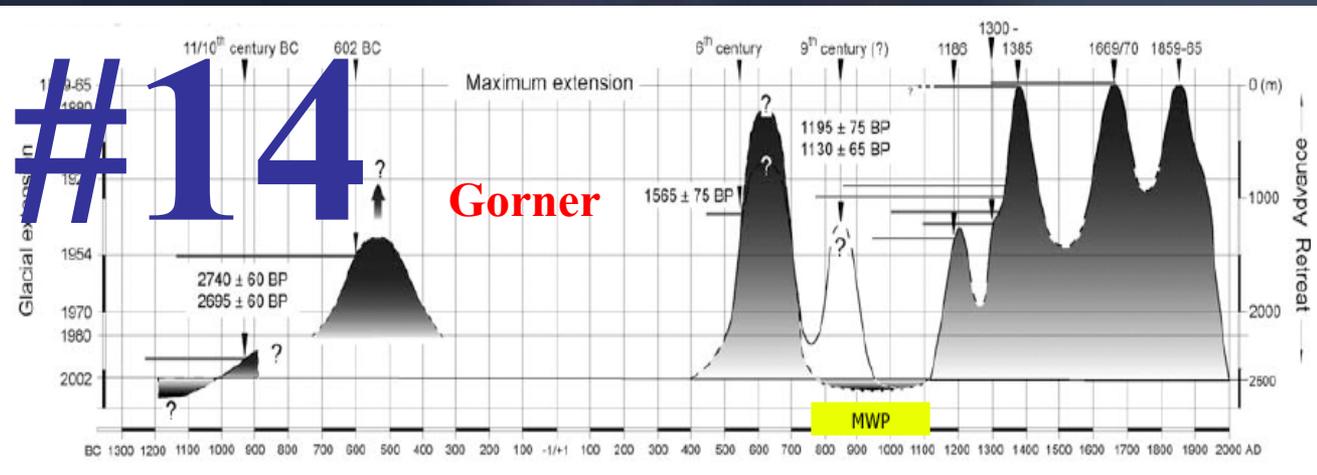


Pollens, L. Toskaljavri, N. Fennoscandia

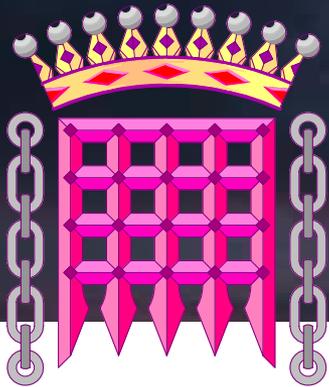




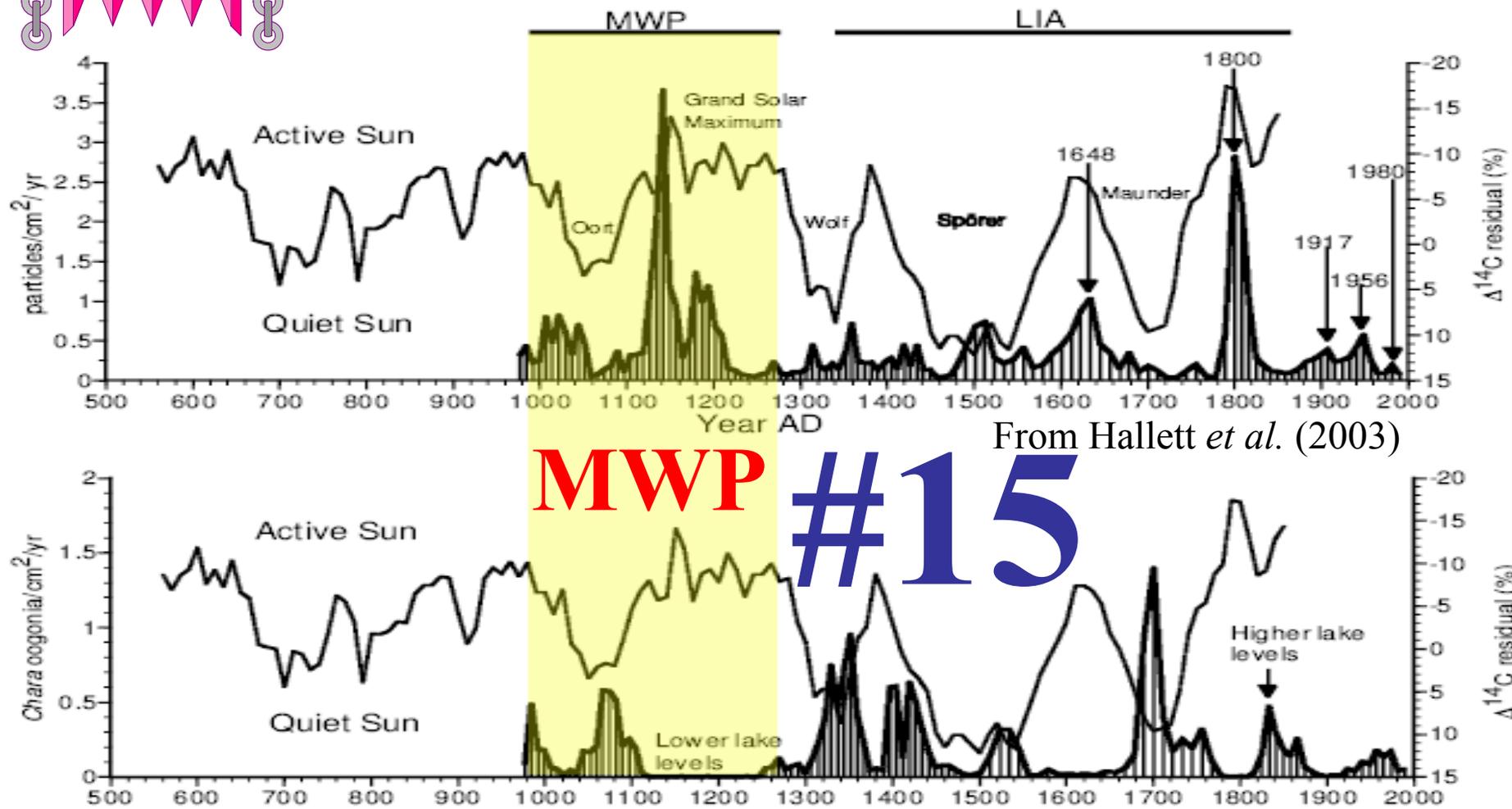
Glacial variation in the Swiss Alps

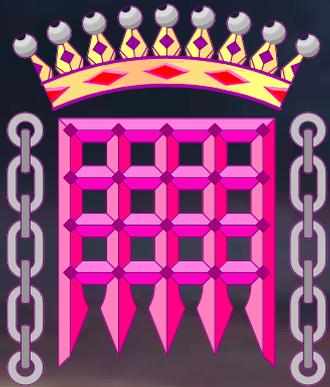


From Holzhauser *et al.* (2005)

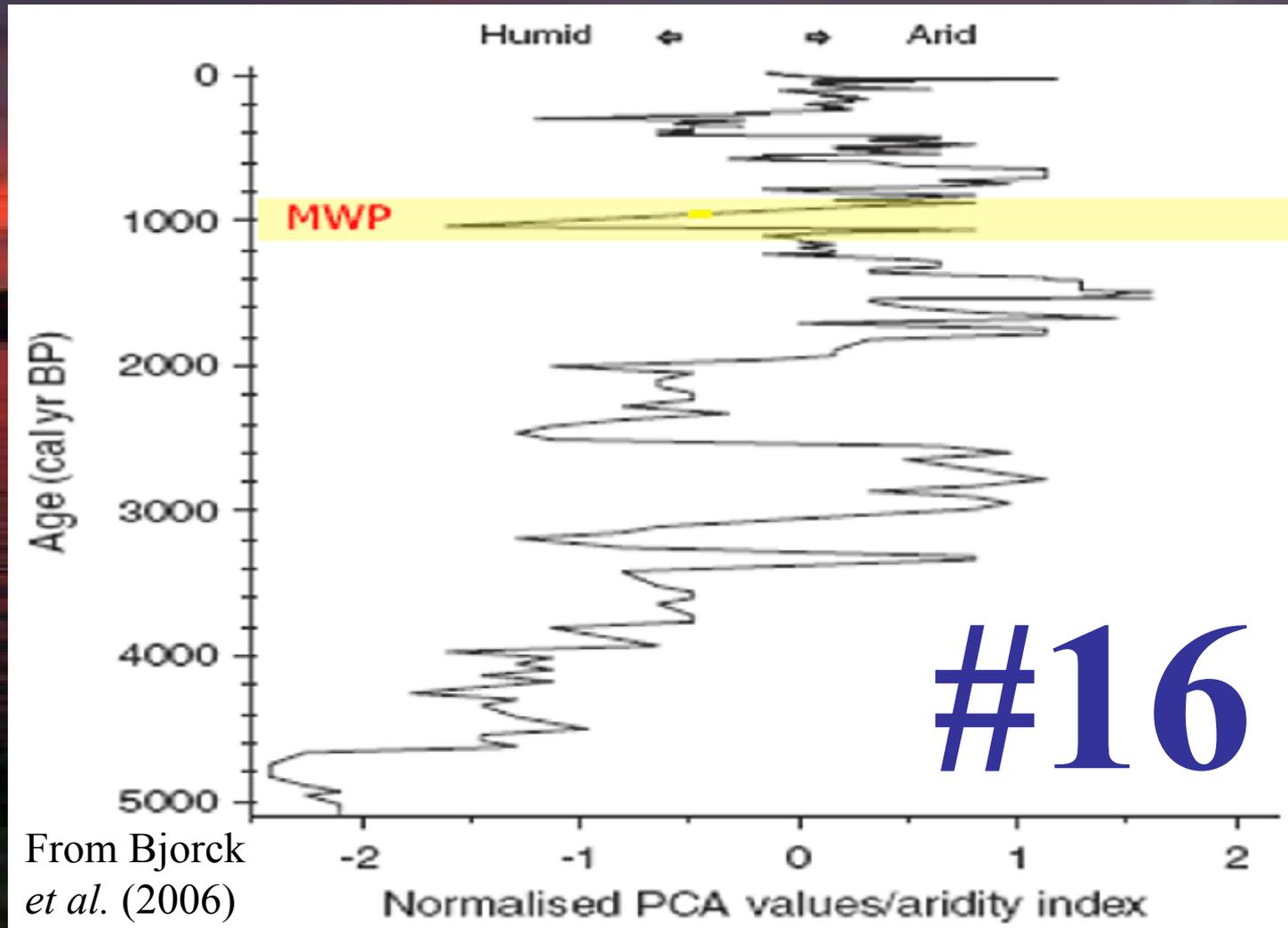


Fire dendrochronology, Dog Lake, BC, Canada

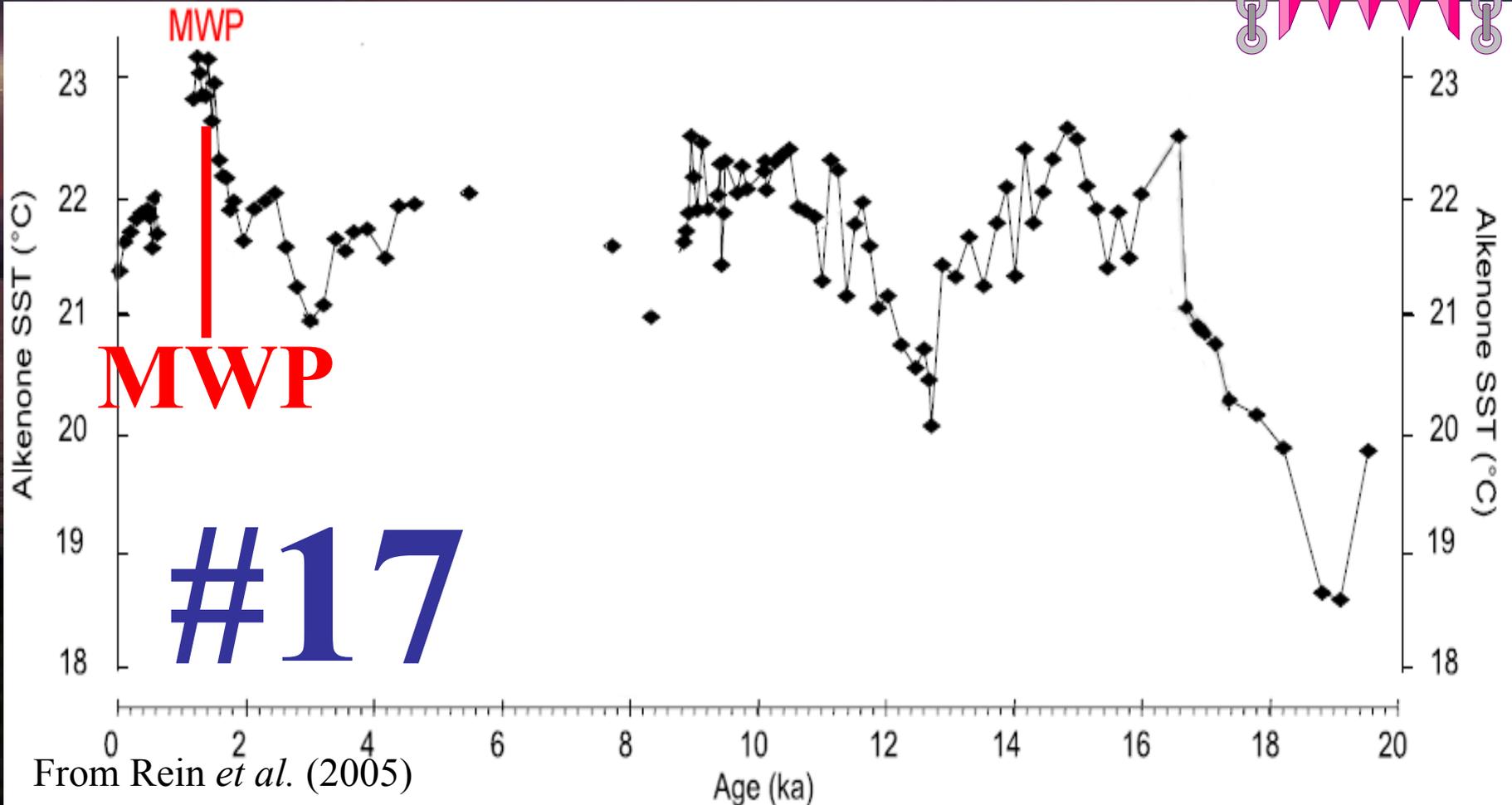
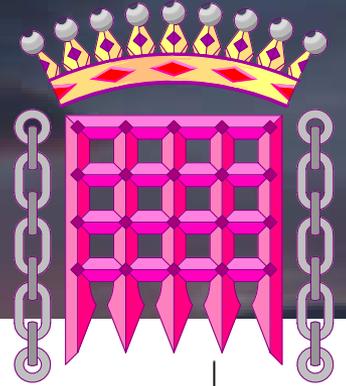


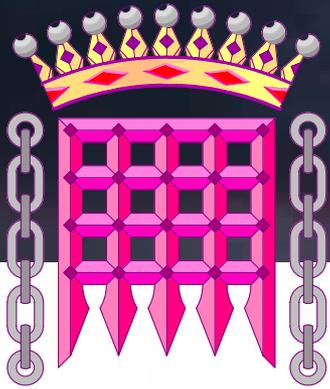


Sediments, Pico Island, Azores, North Atlantic

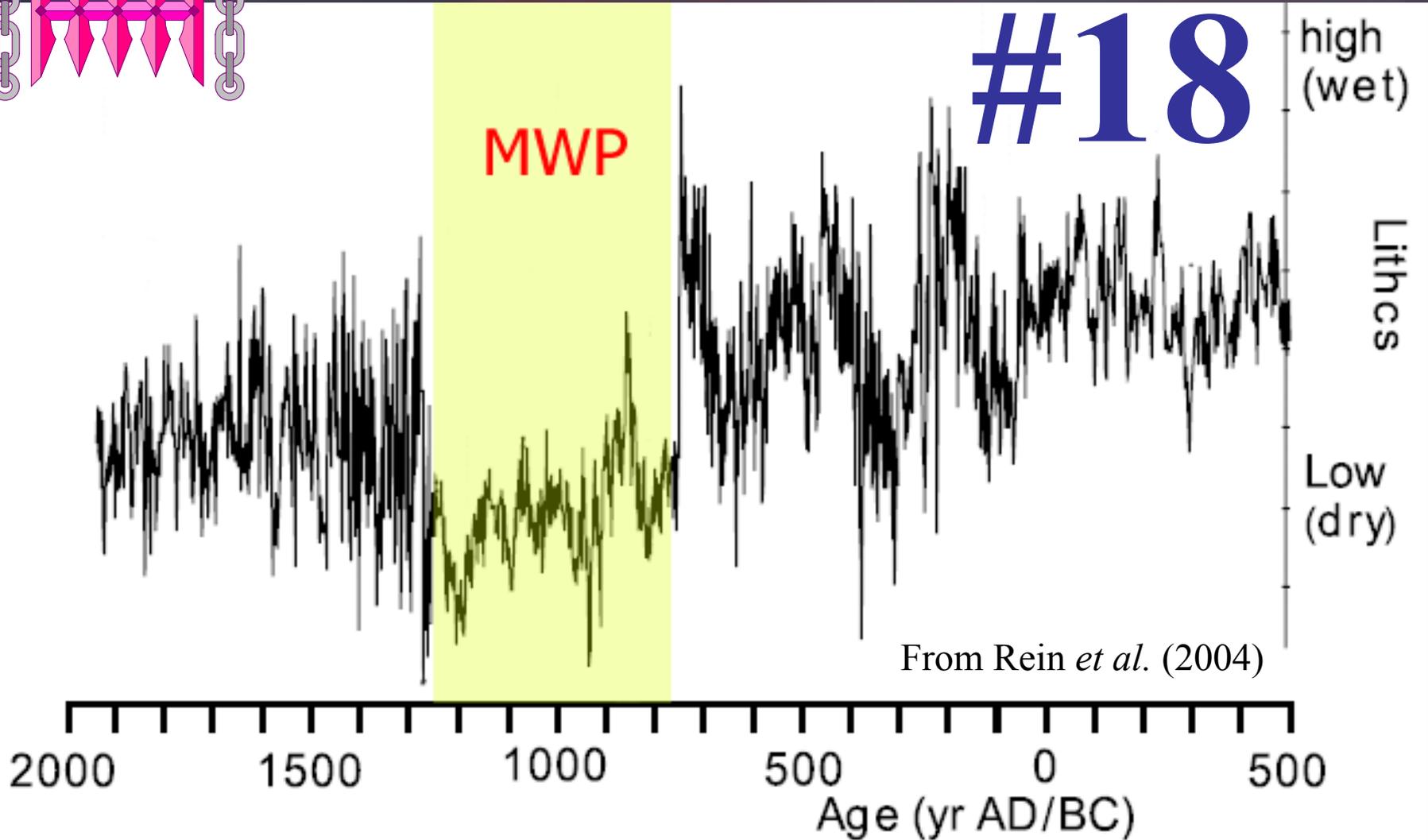


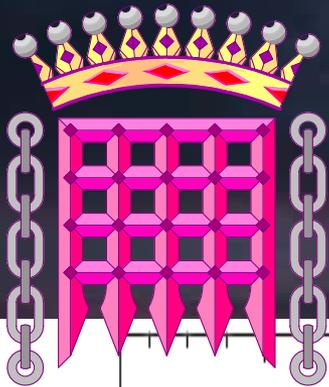
Alkenone SST proxies, Coastal Peru, S. America



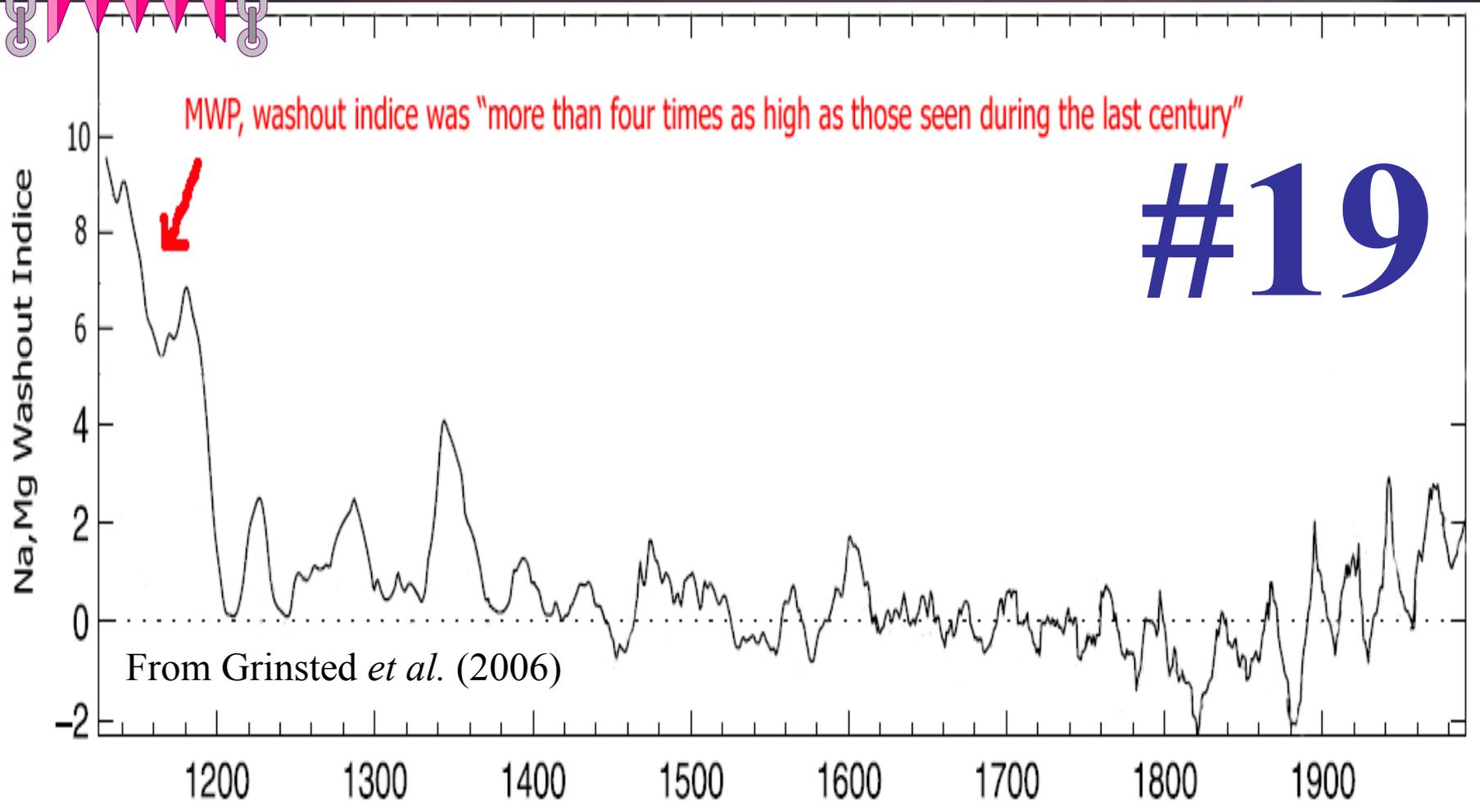


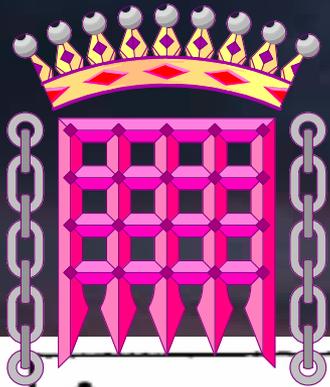
El Nino flooding proxy, Coastal Peru, S. America



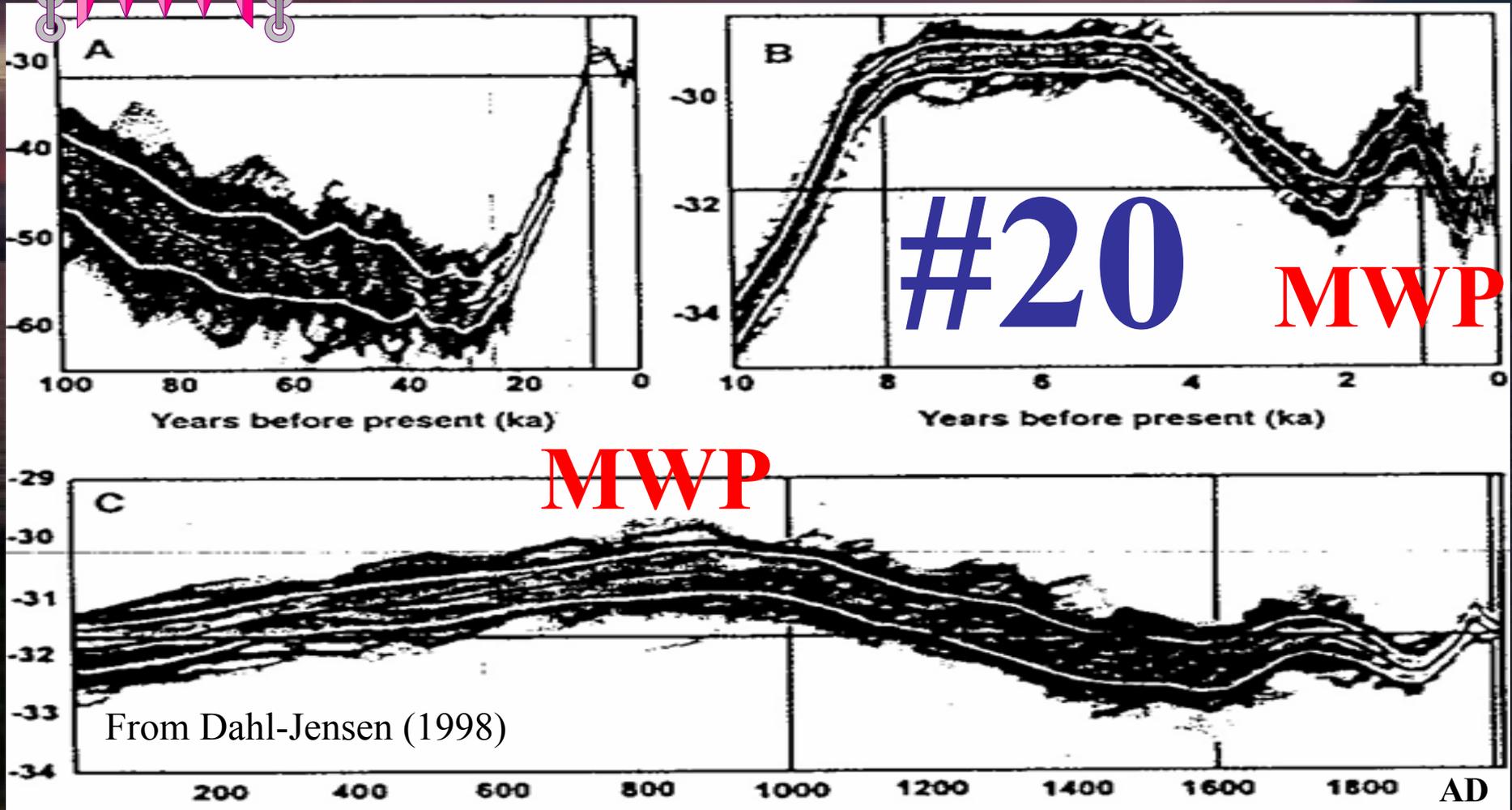


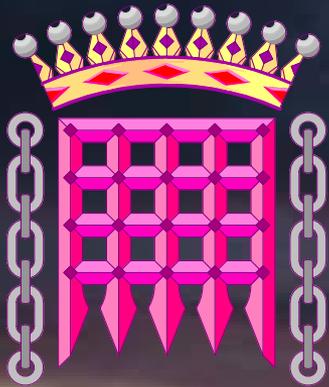
Lomonosovfonna Ice Core from Svalbard, Norway



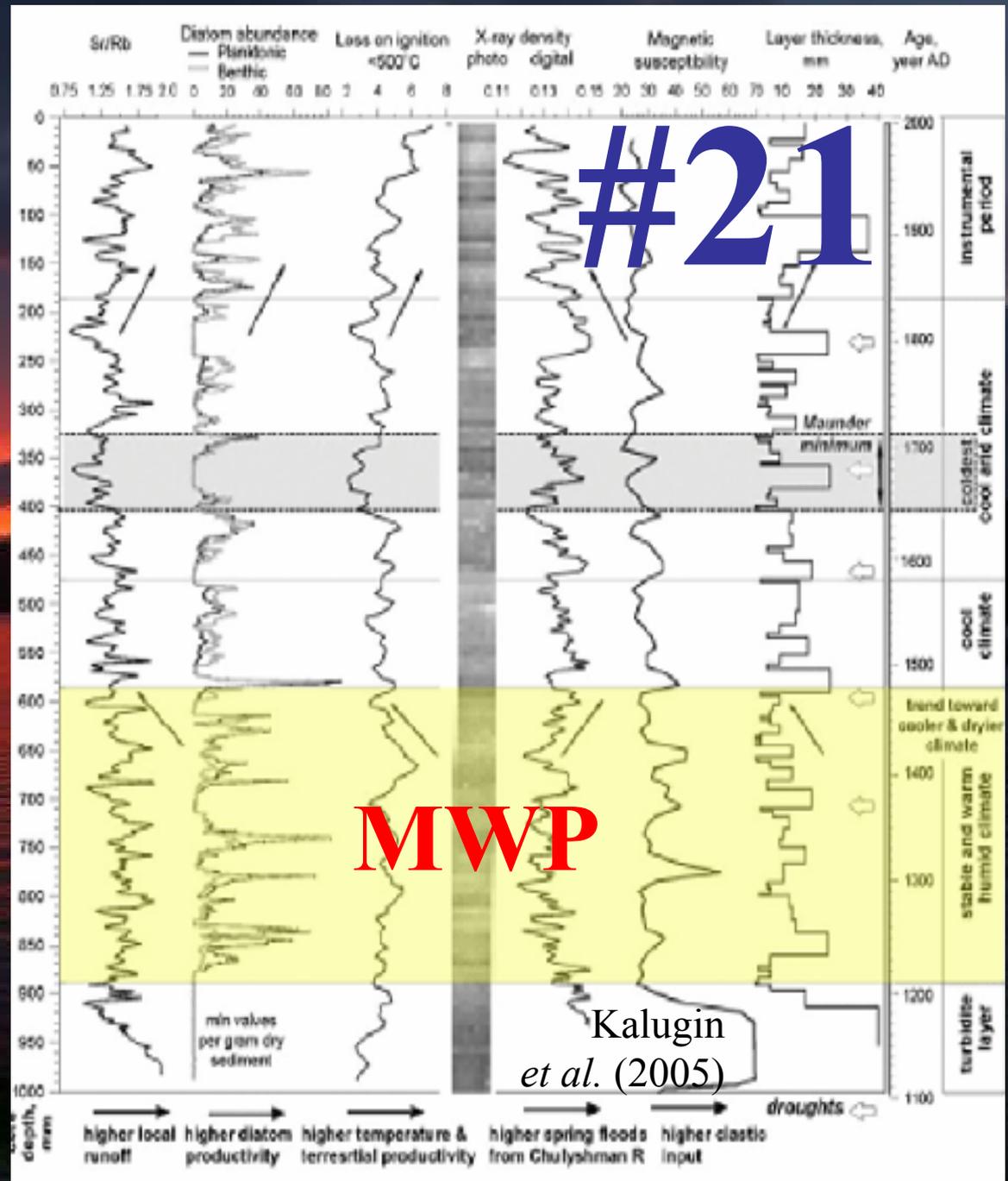


Ice-core from the summit of the Greenland ice sheet

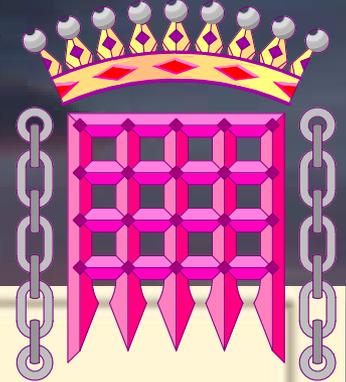




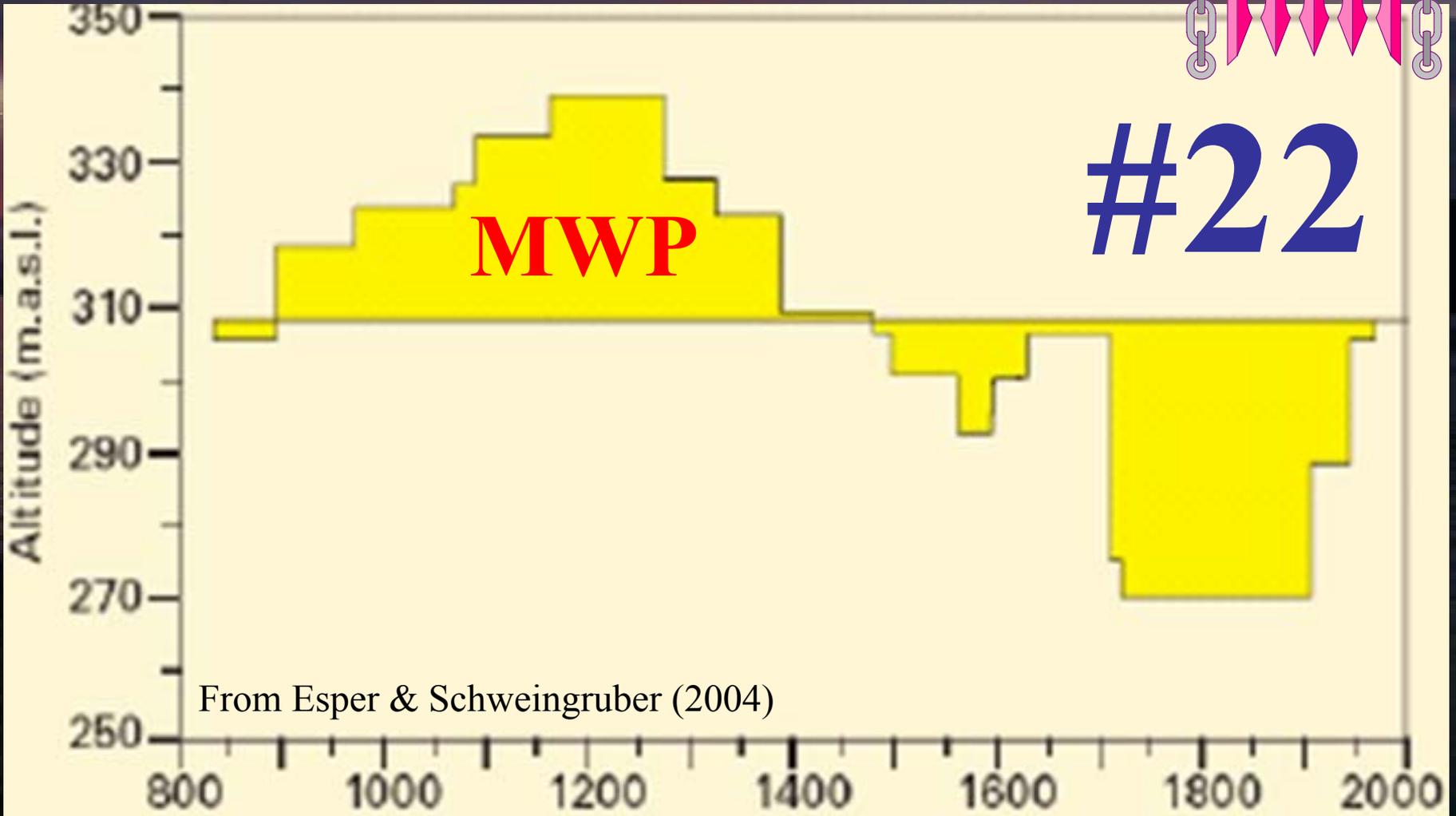
Sediment from Lake Teletskoye, Altai Mts., S. Siberia

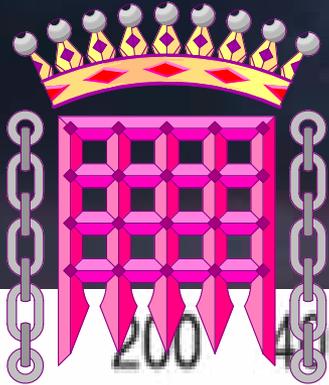


Treeline altitudes from the Polar Urals



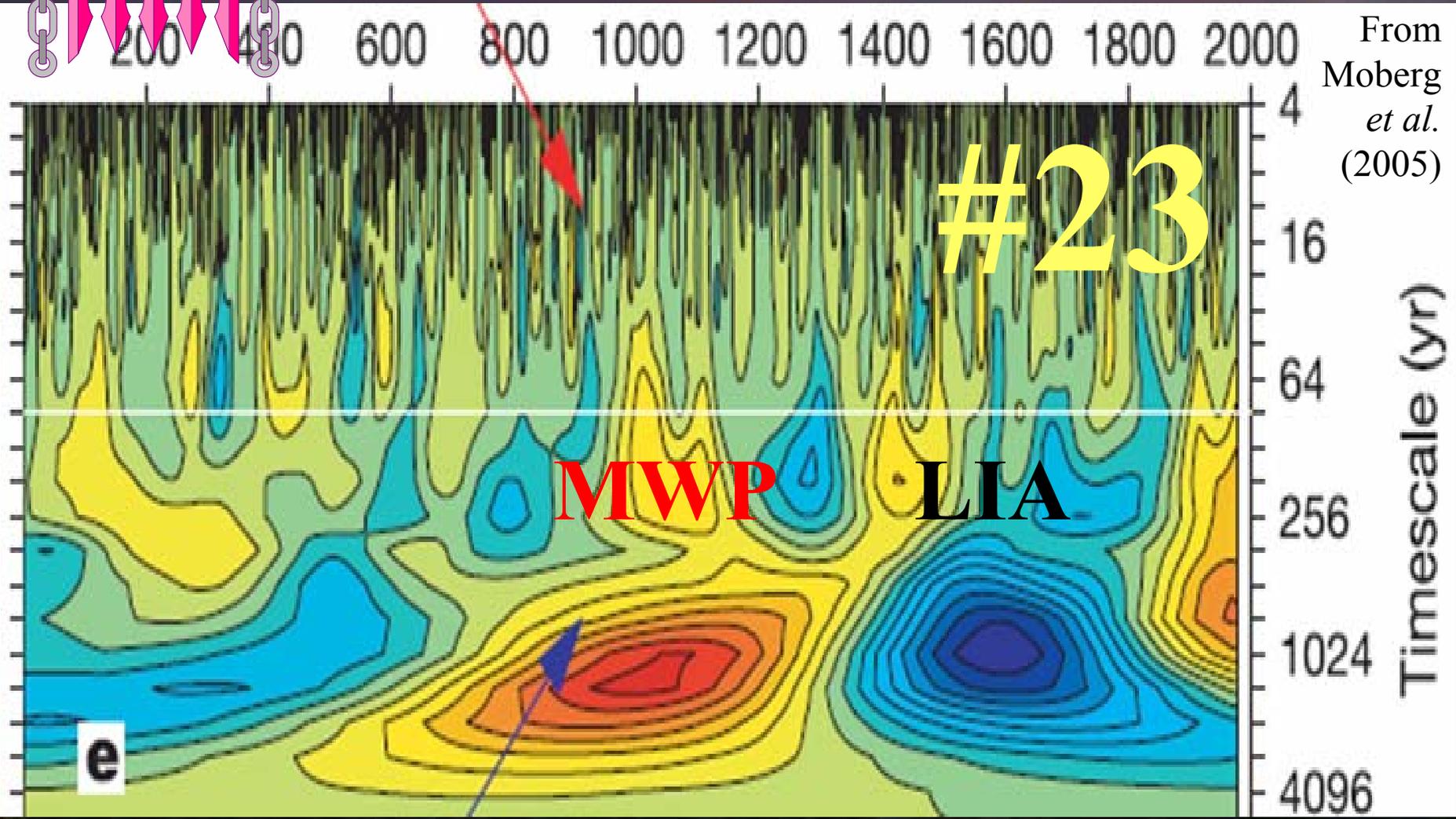
#22



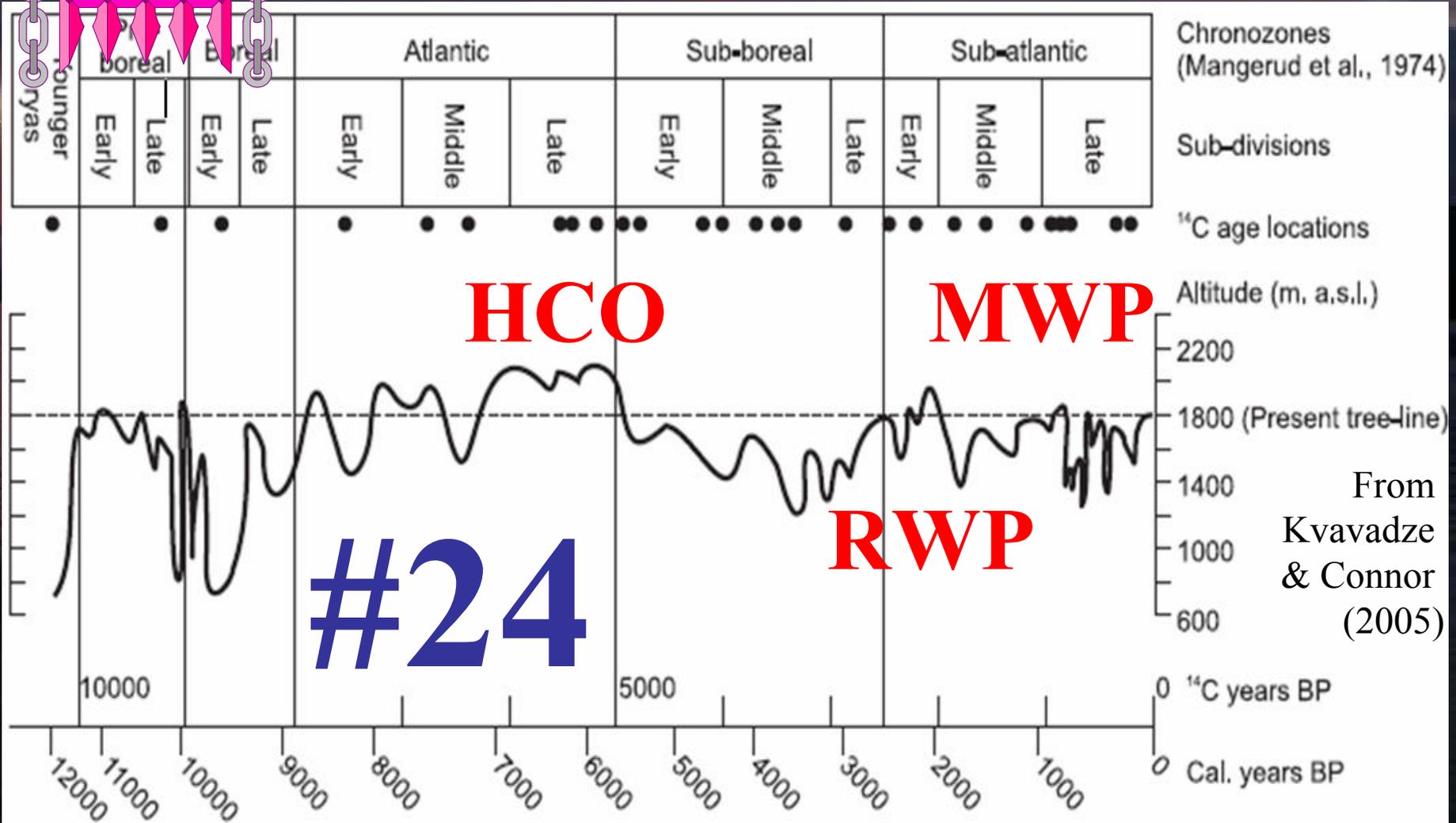


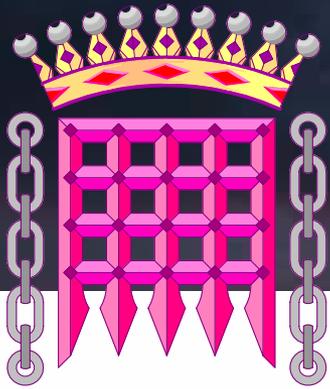
Timescale-sensitive N. Hemisphere temperature

From Moberg *et al.* (2005)



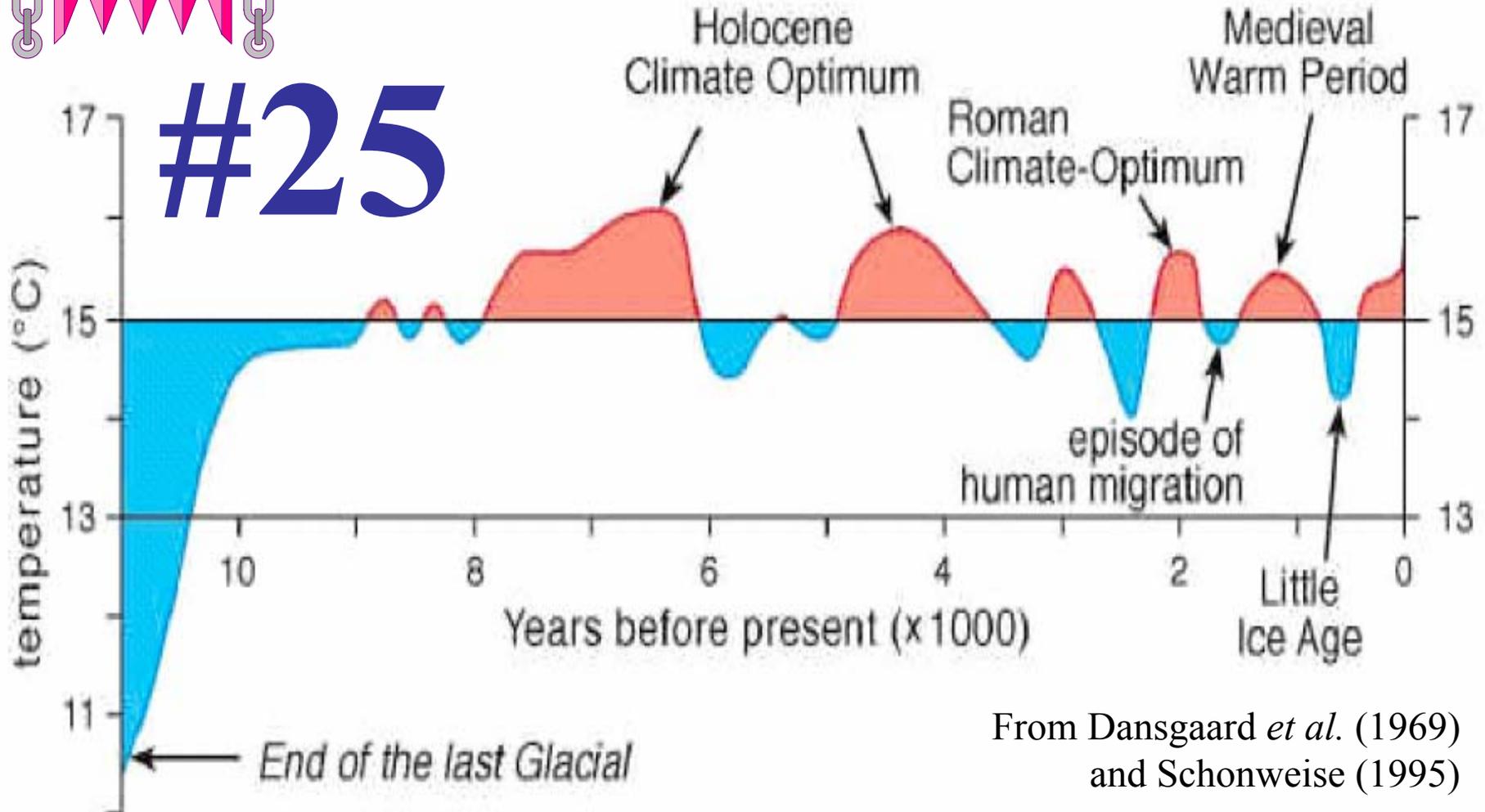
Sediment-based treeline for *Zelkova Carpinifolia*



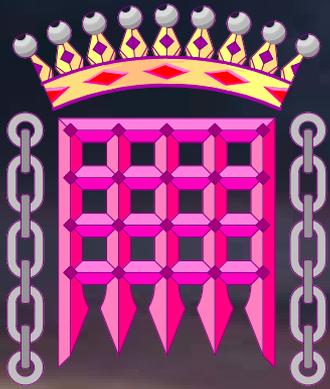


Brief history of recent climate optima

#25



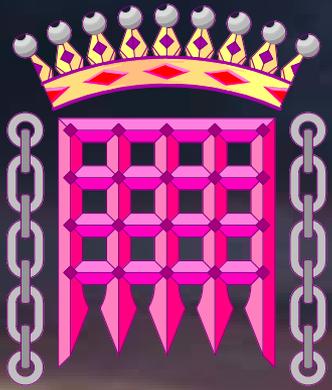
From Dansgaard *et al.* (1969)
and Schonweise (1995)



**Tree-stump
of 1340 AD
well above
today's
California
tree-line**

#26





**Because the Mediaeval
Warm Period was up to
3°C warmer than today:**

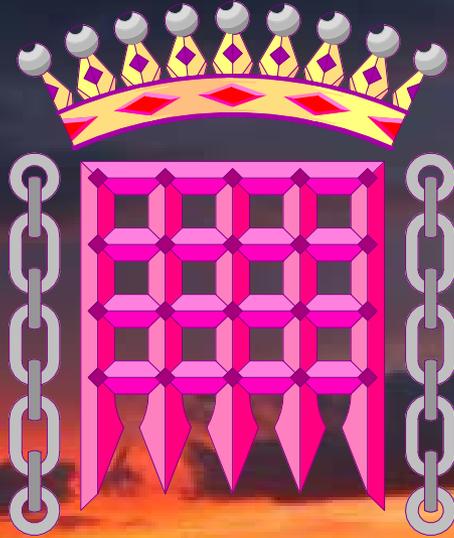
Today's temperatures are not exceptional

Nature caused mediaeval warming

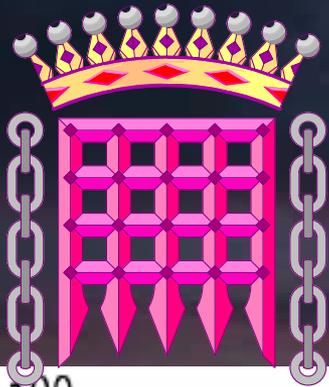
There was no mediaeval climate cataclysm

Nature may be causing today's warming

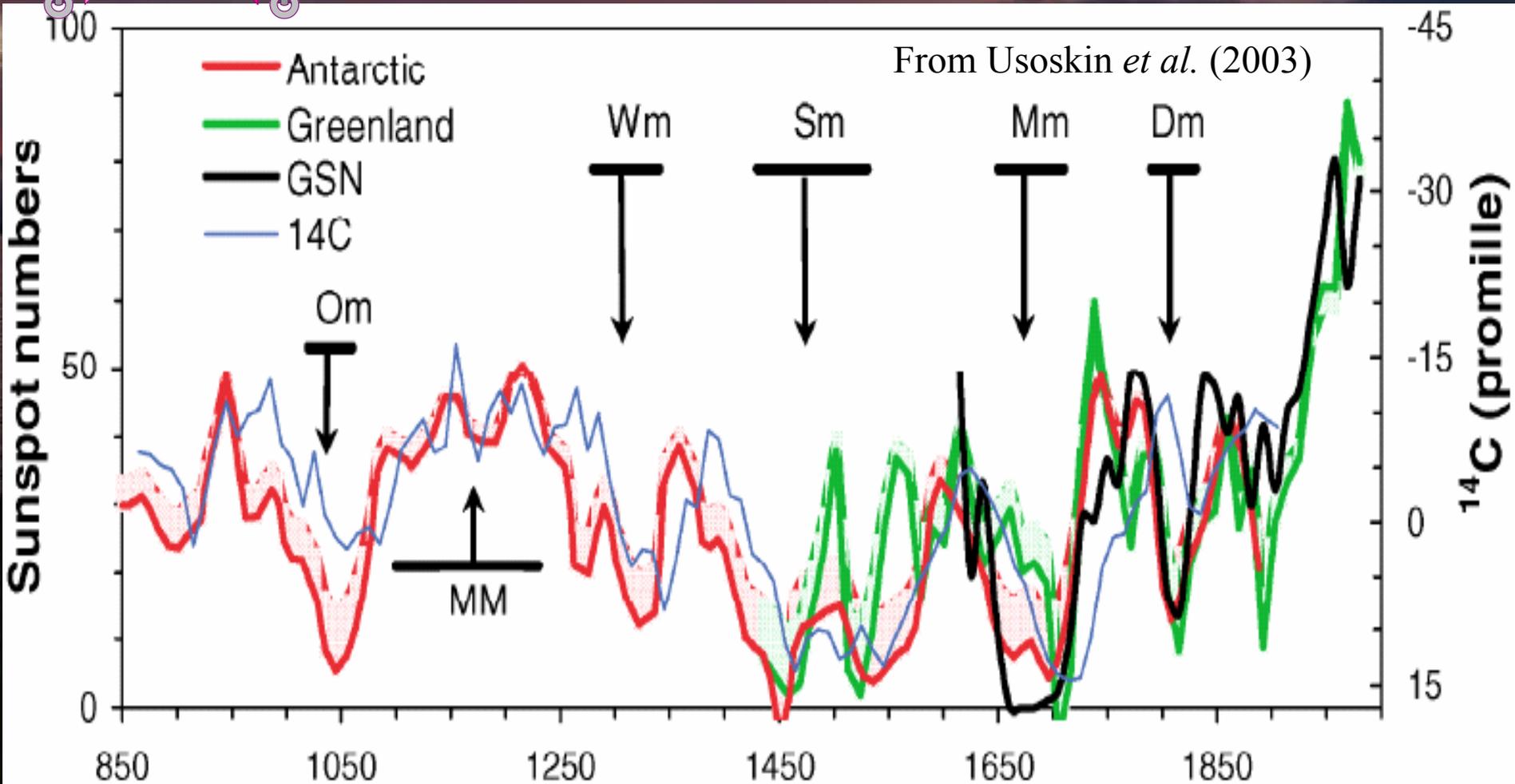
Climate catastrophe is not looming



**Is the Sun
to blame?**



Solar activity has been at record levels for 70 years

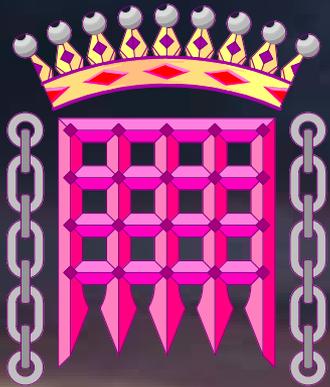




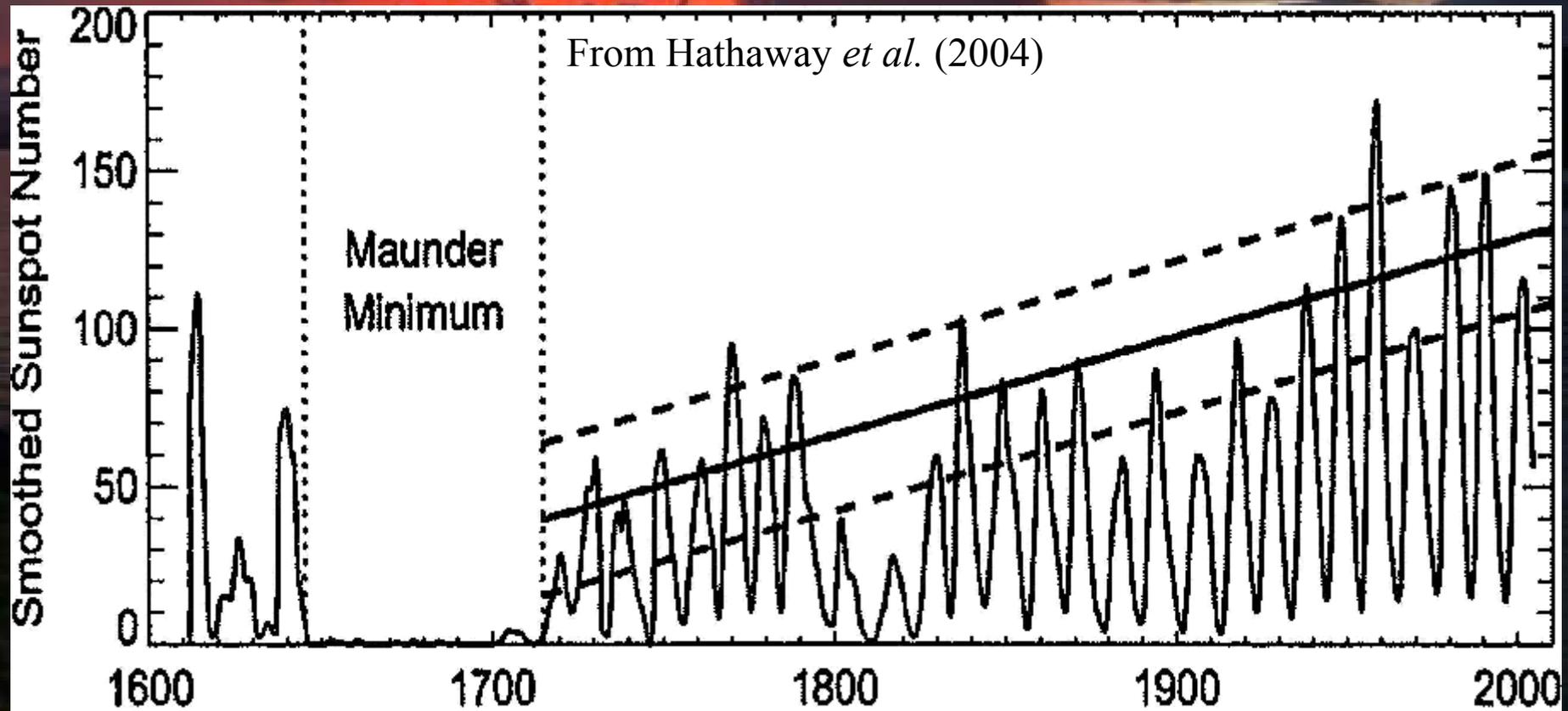
The busy Sun

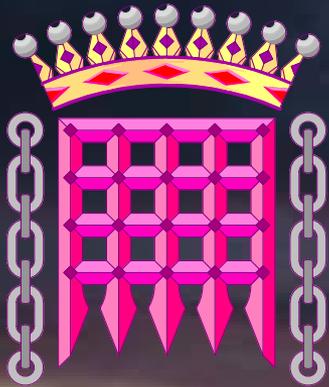
“... The level of solar activity during the past 70 years is exceptional. The previous period of equally high activity occurred more than 8,000 years ago ... During the past 11,400 years the Sun spent only of the order of 10% of the time at a similarly high level of magnetic activity.”

Solanki et al. (2005)

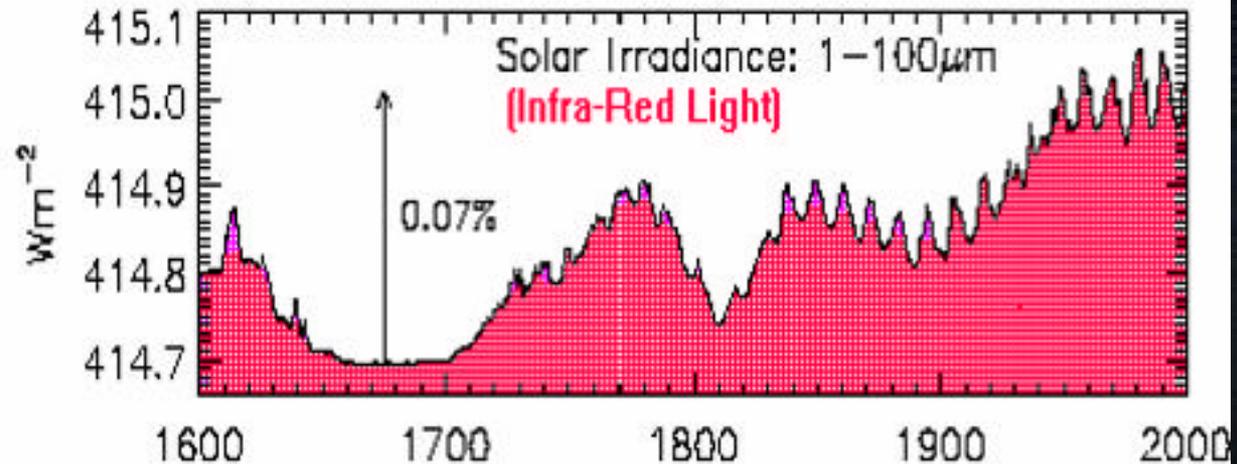
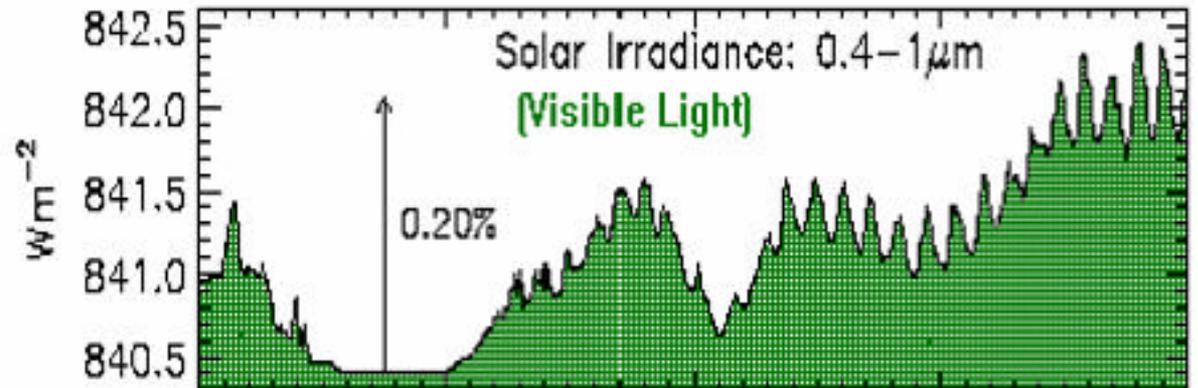
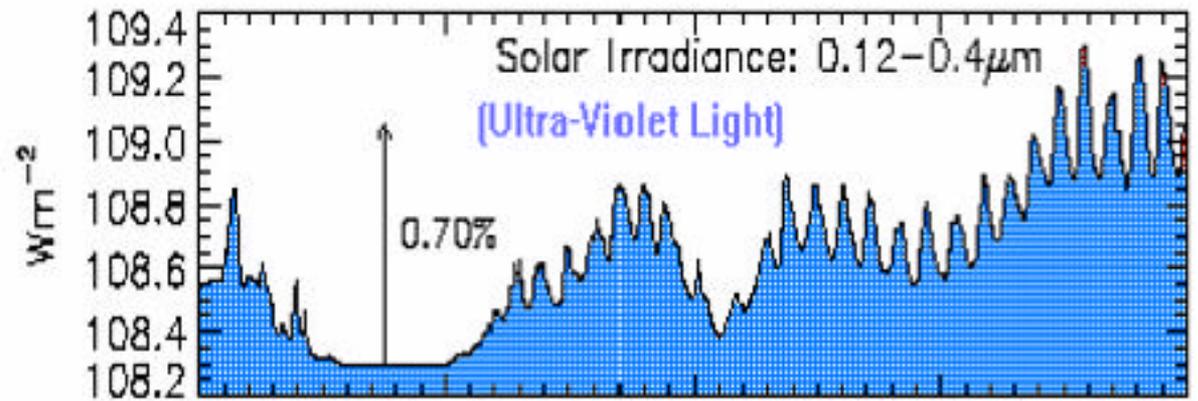


The rising trend of solar activity since 1715



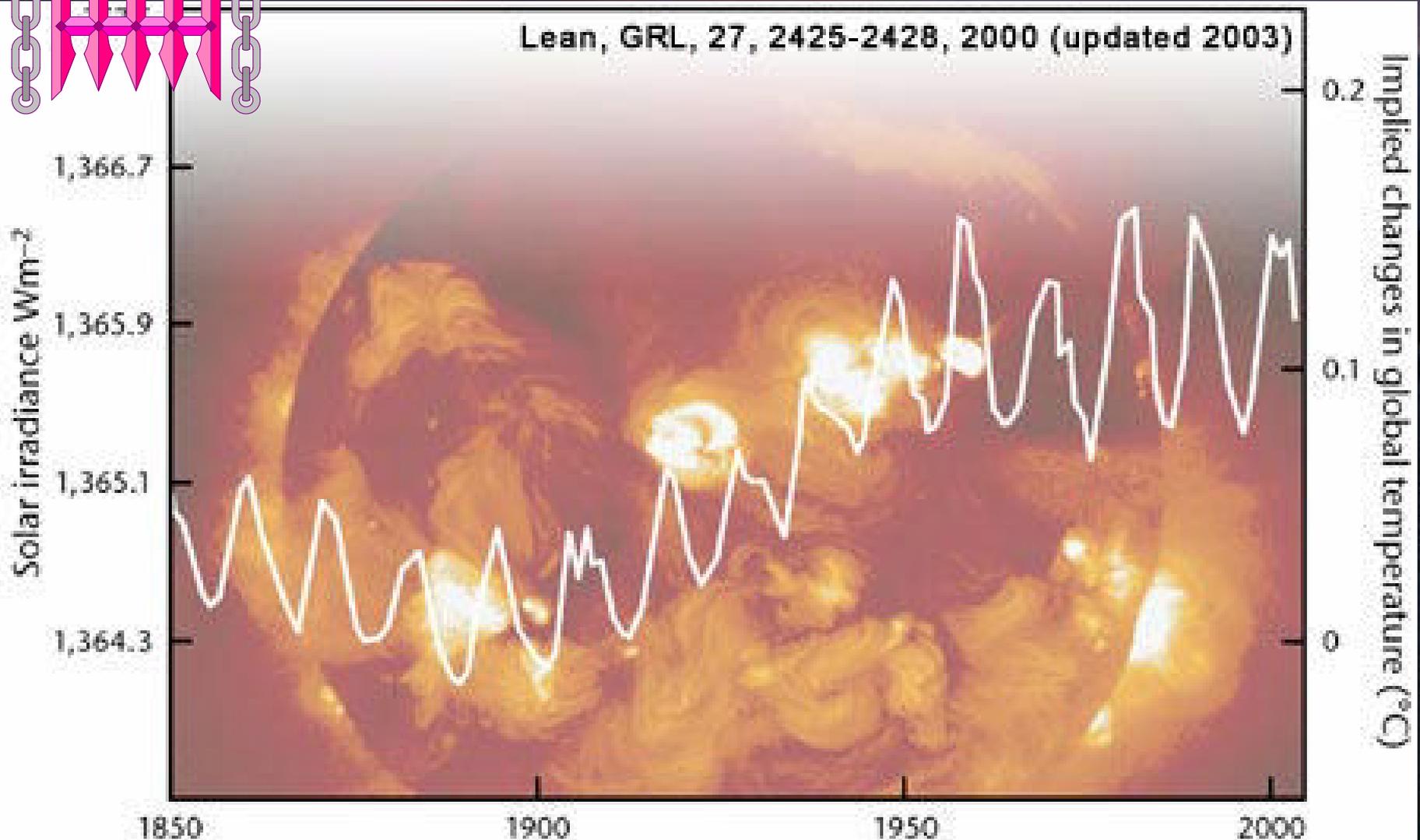


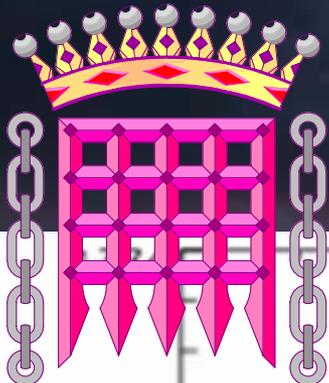
The rise
in solar
activity
occurs
at all
wave-
lengths



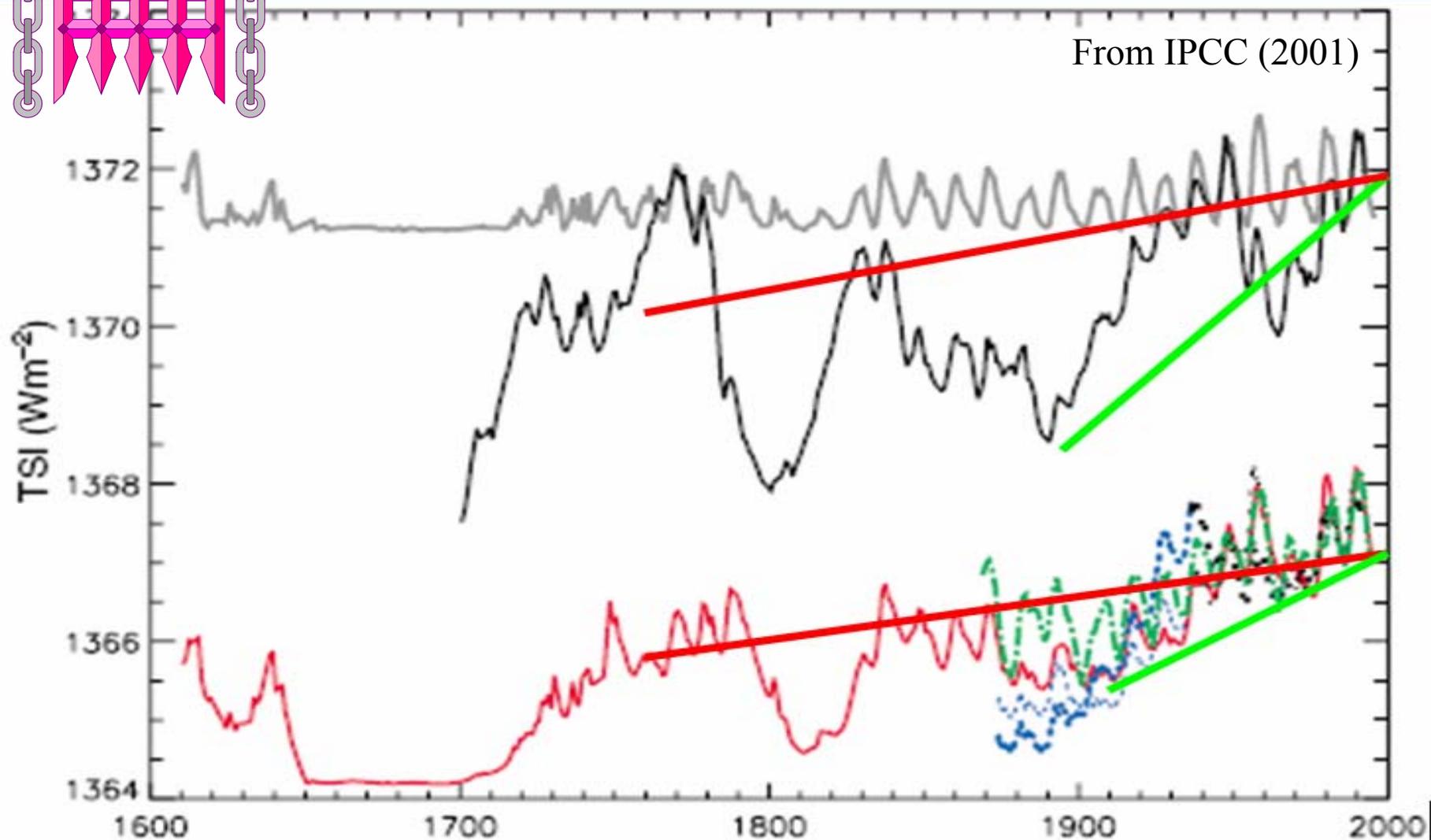
High activity since 1900

Lean, GRL, 27, 2425-2428, 2000 (updated 2003)

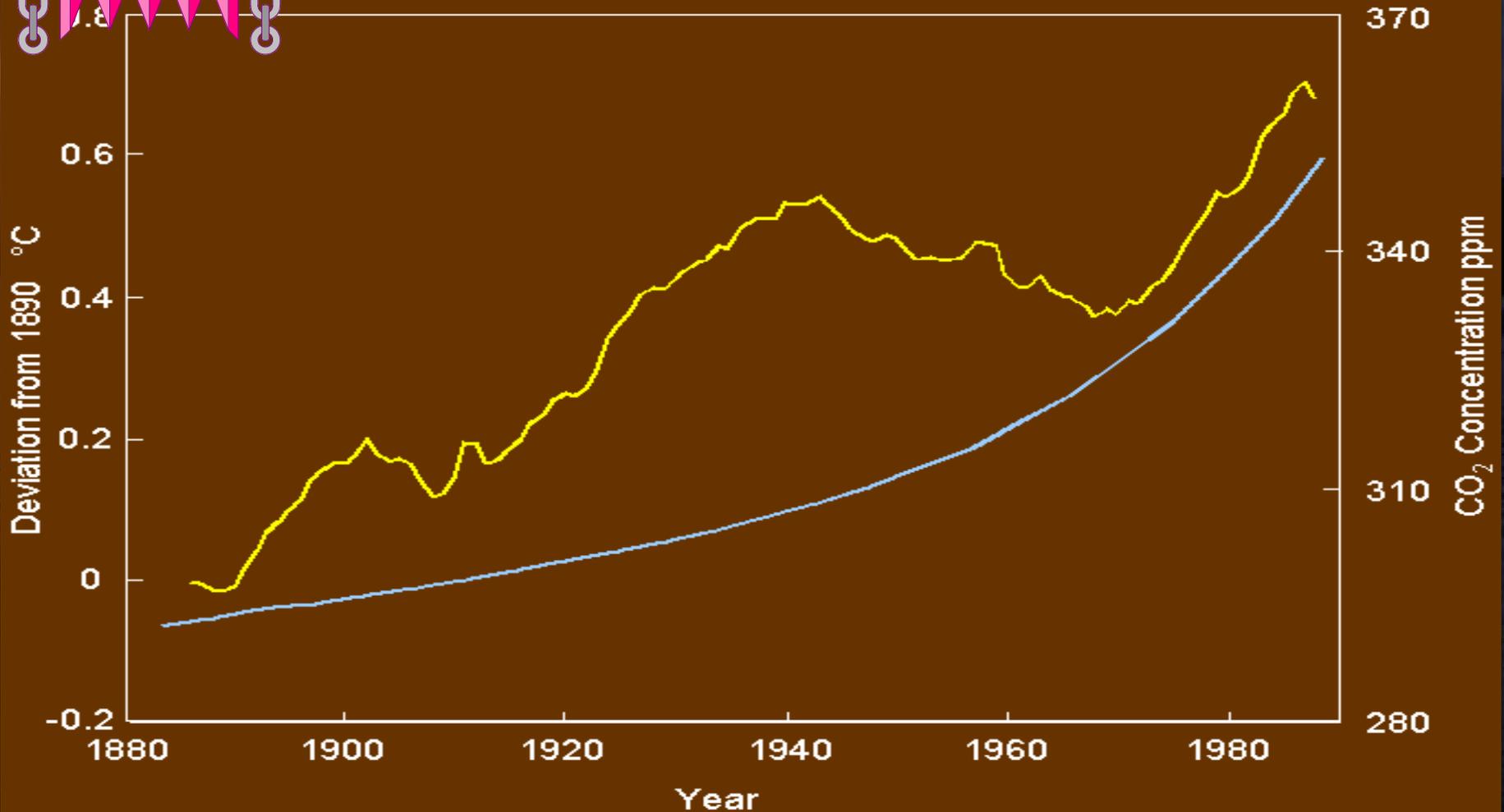
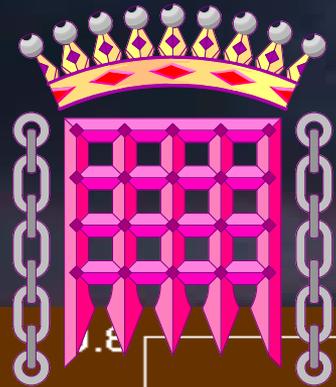


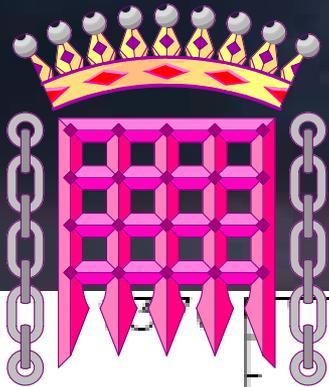


The IPCC's slope trick

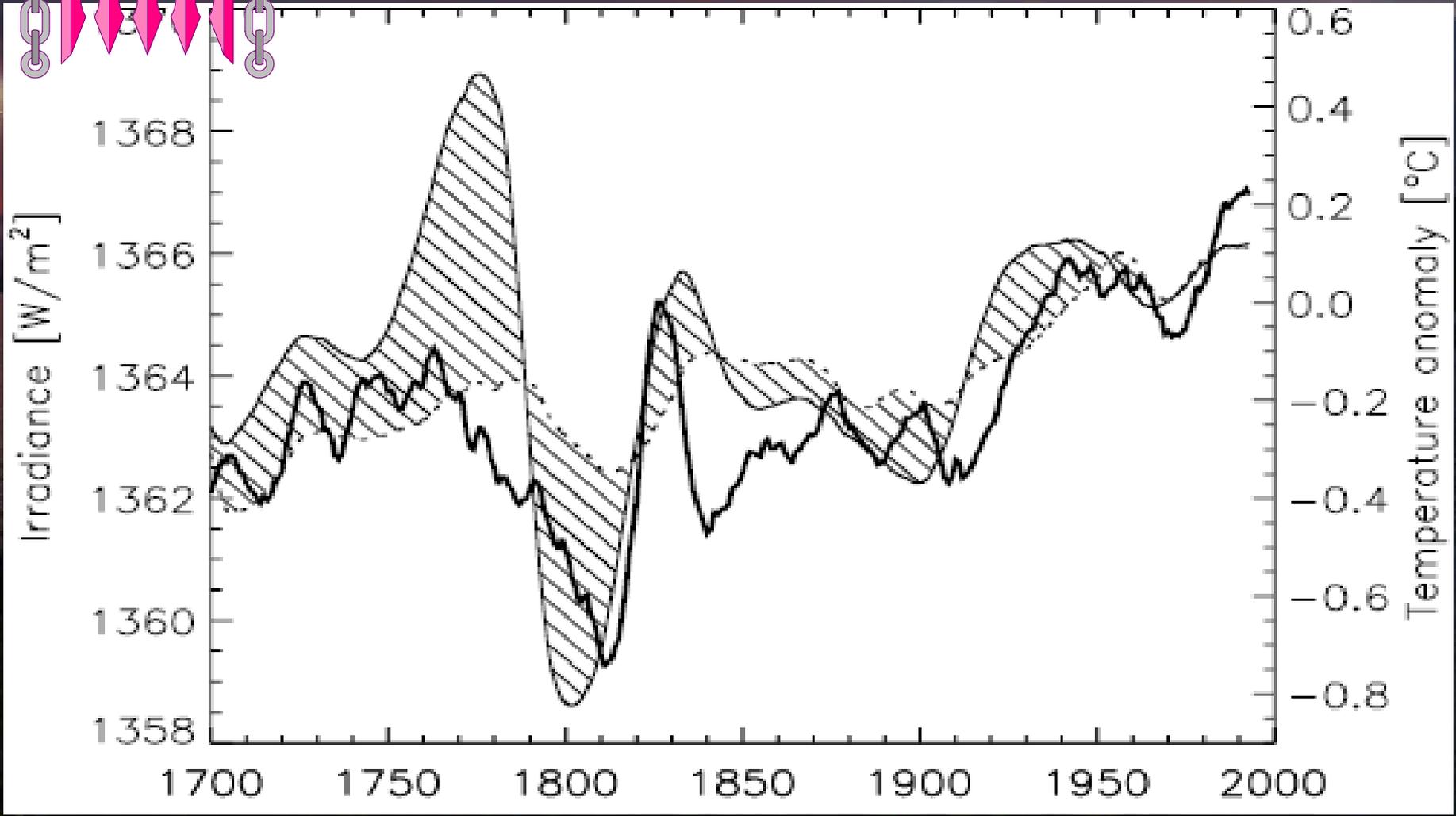


Temperature does not track CO₂, 1880-1990

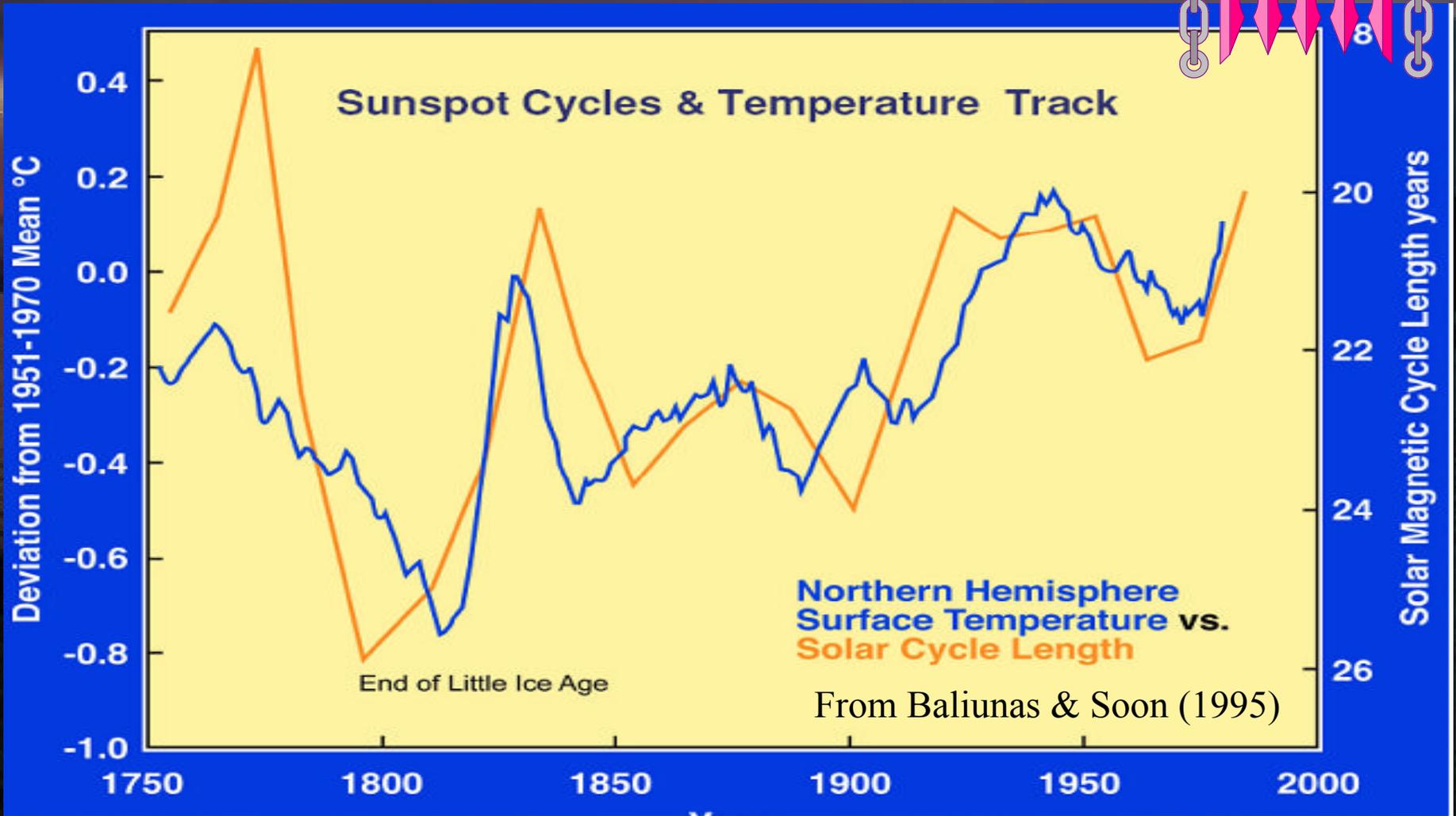


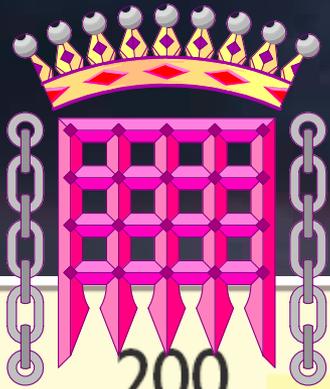


Temperature tracks solar activity, 1700 - 2000



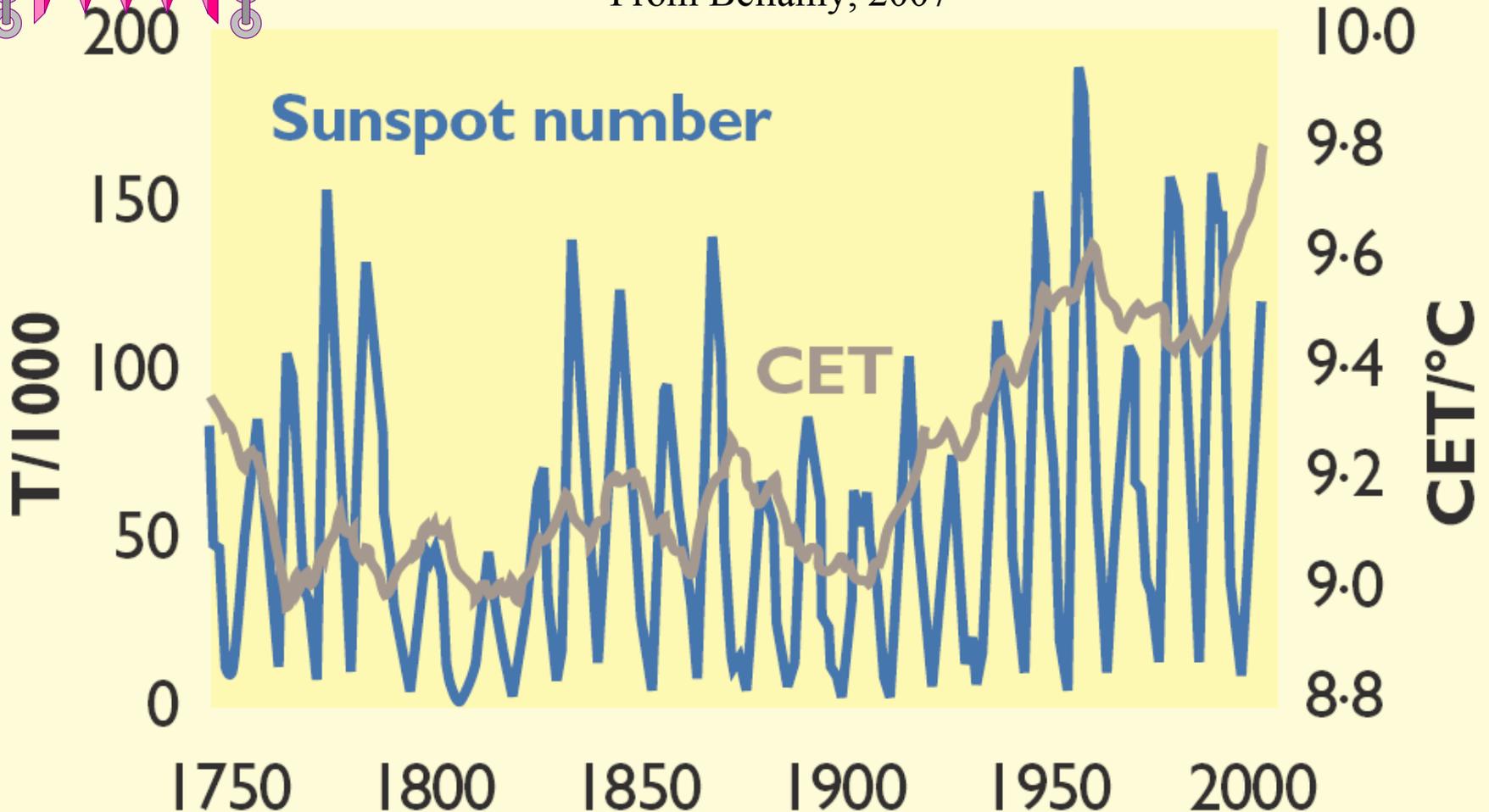
N.H. temperature tracks solar activity, 1750-1980





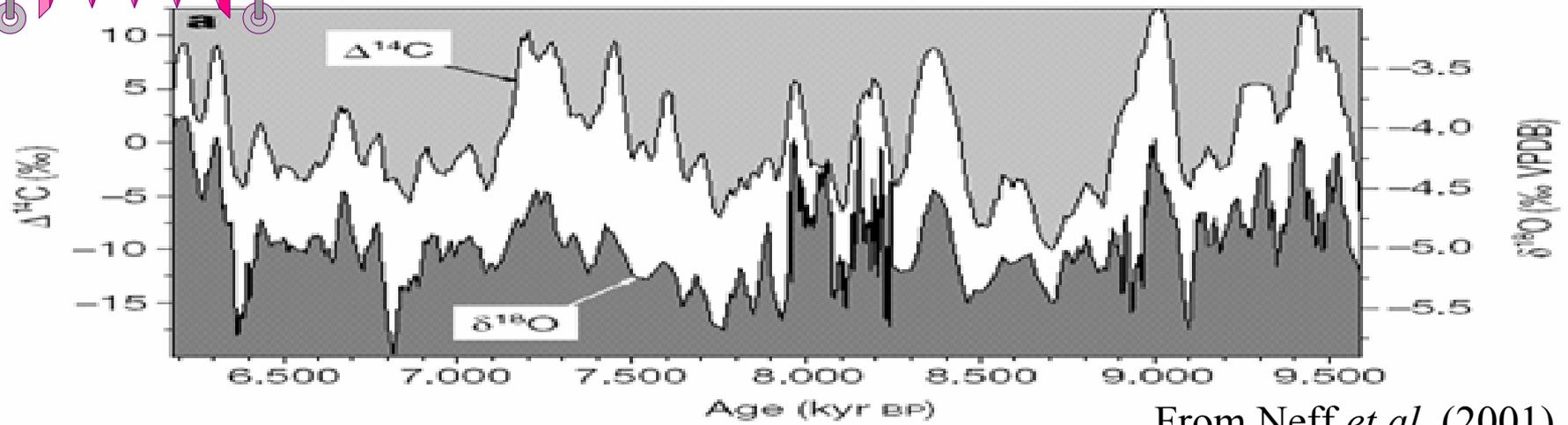
U.K. temperature tracks solar activity, 1750-2000

From Bellamy, 2007

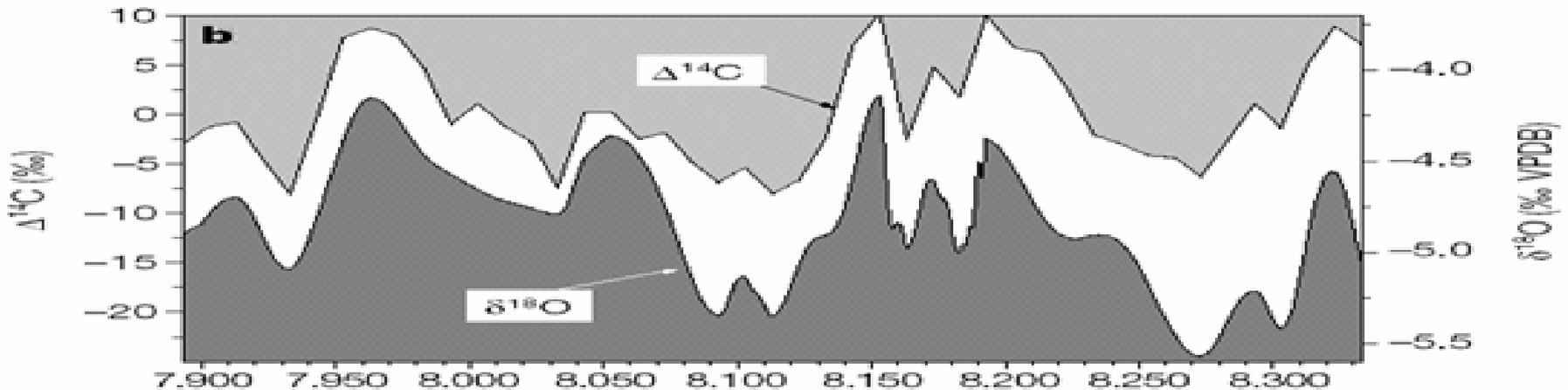


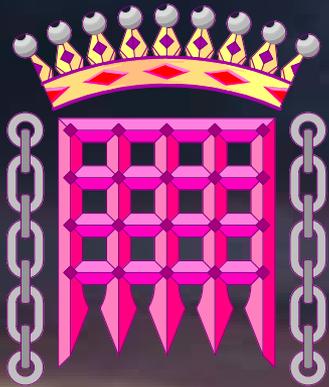


Monsoon activity tracks palaeo-solar activity

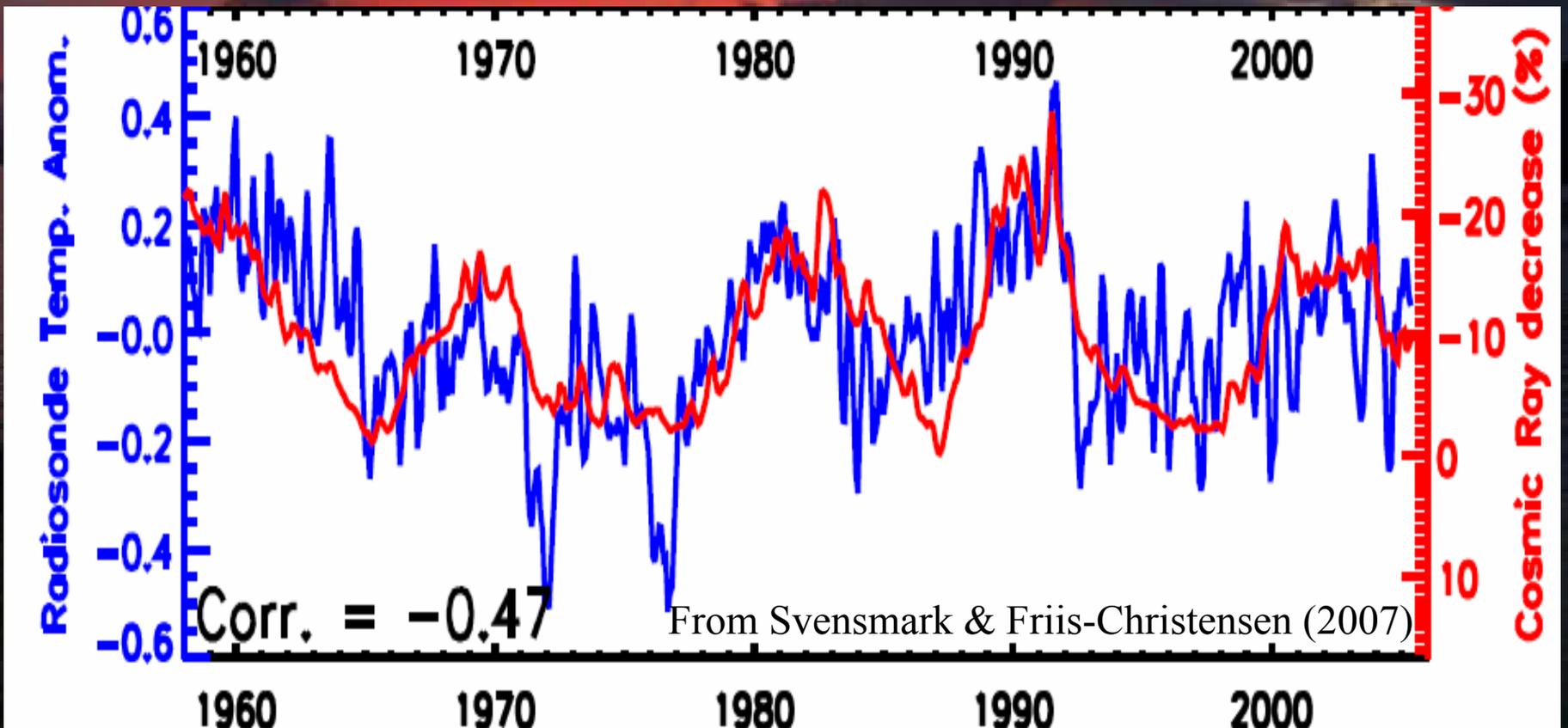


From Neff *et al.* (2001)

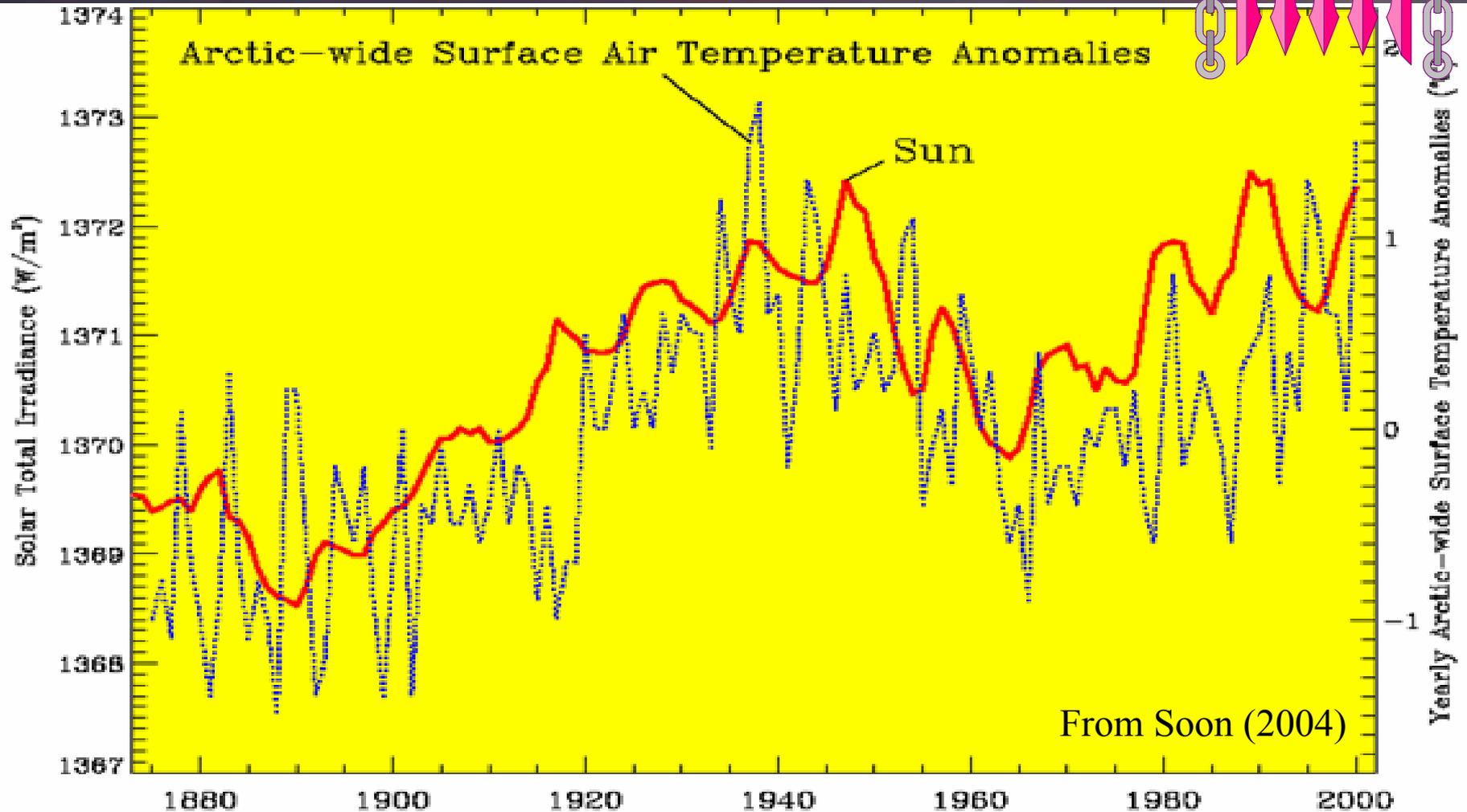
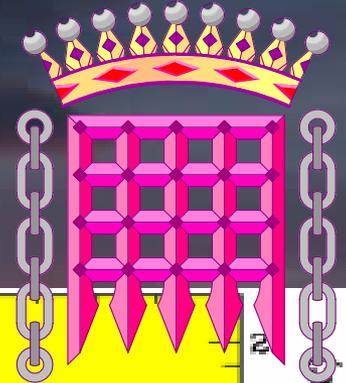




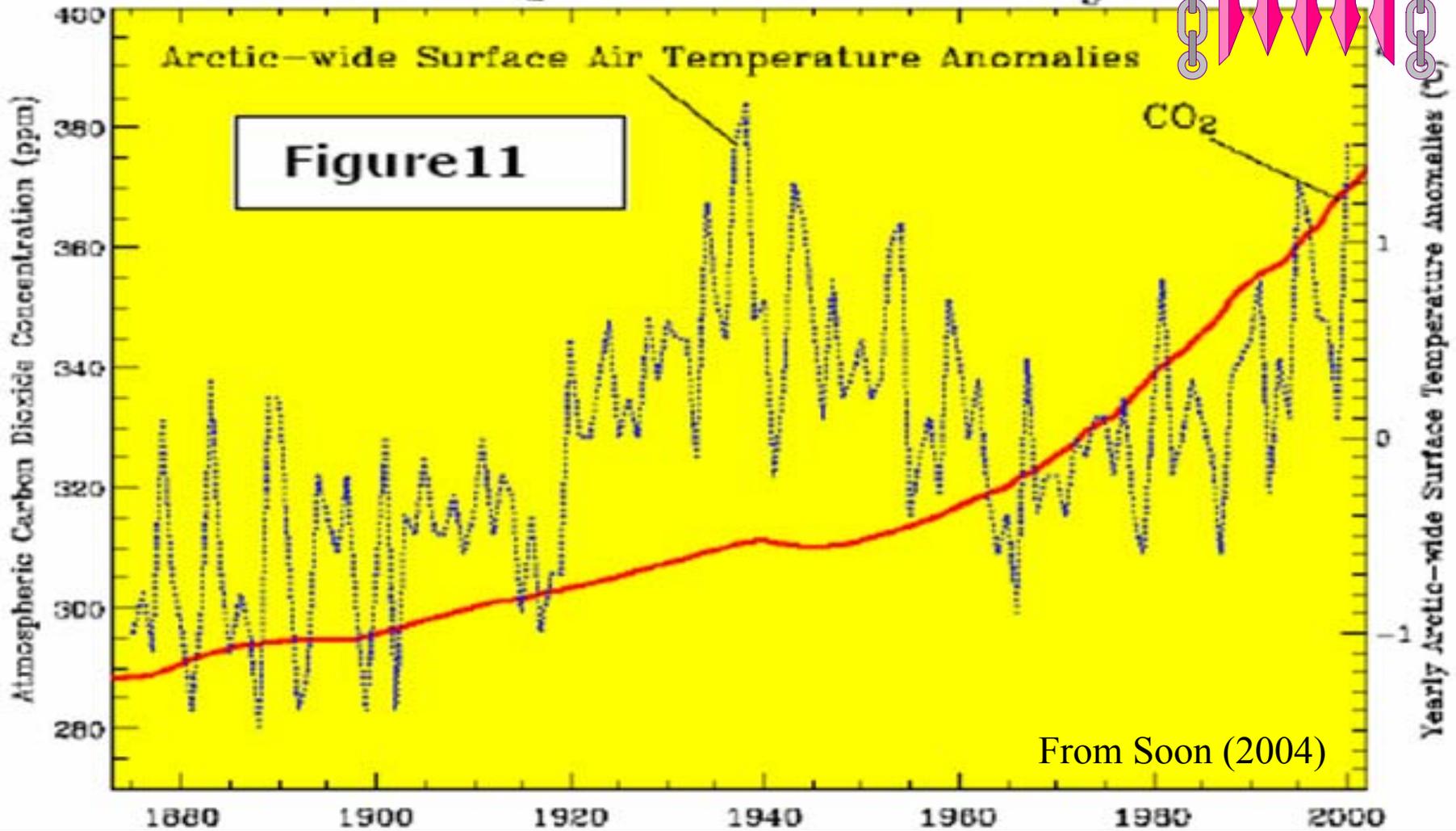
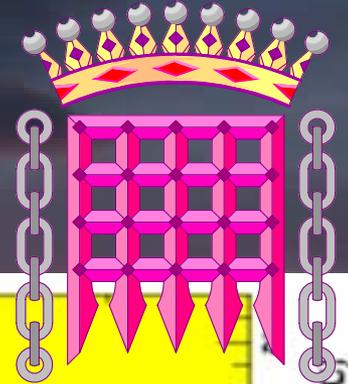
Temperature inversely tracks cosmic rays



Temperature tracks solar activity in the Arctic ...

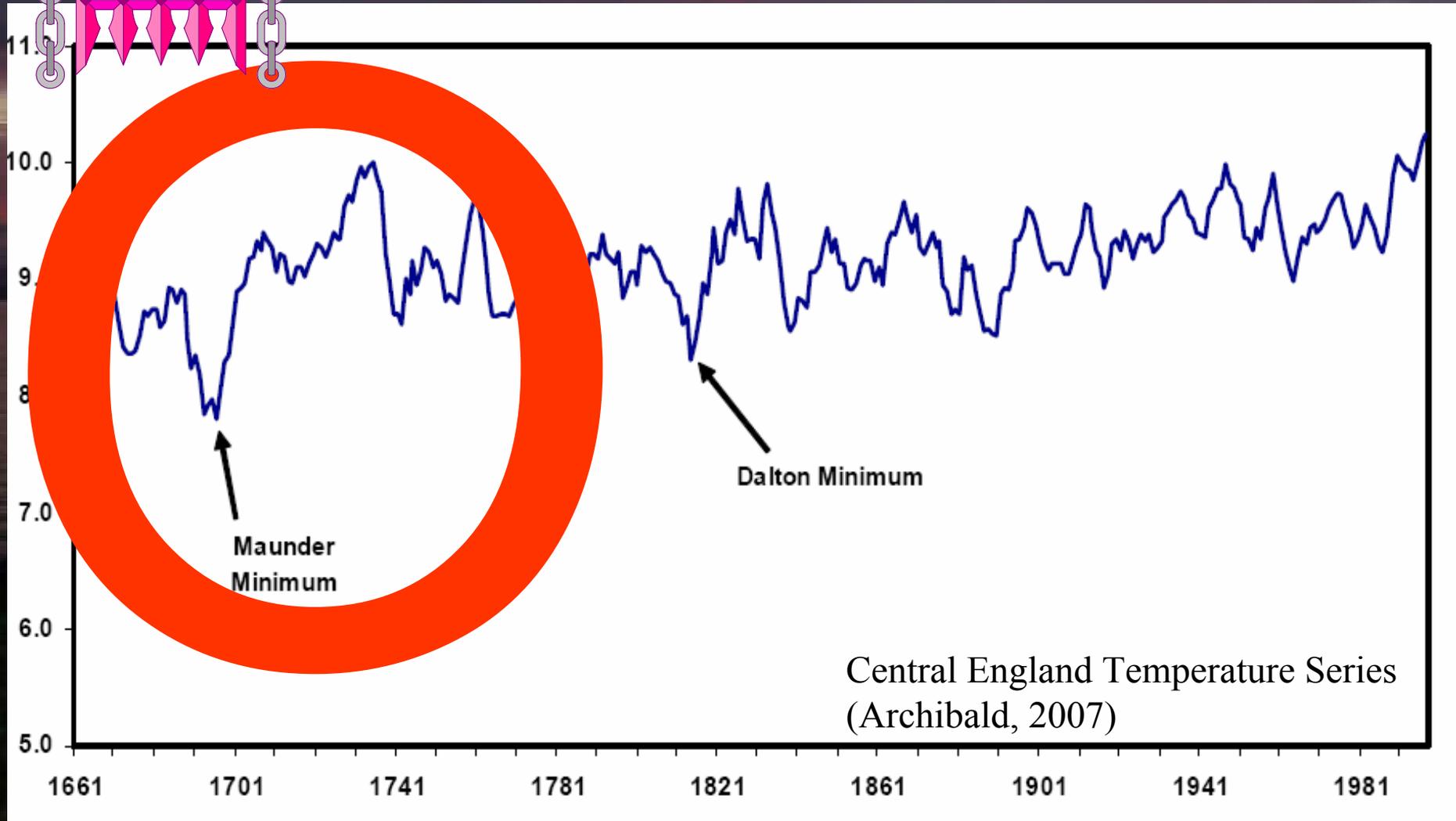


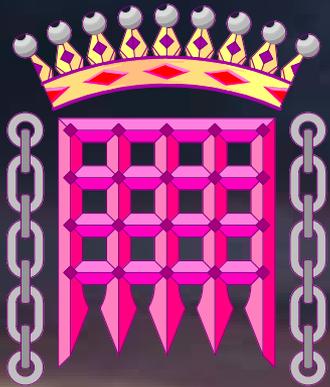
... but does not track
CO₂ concentration



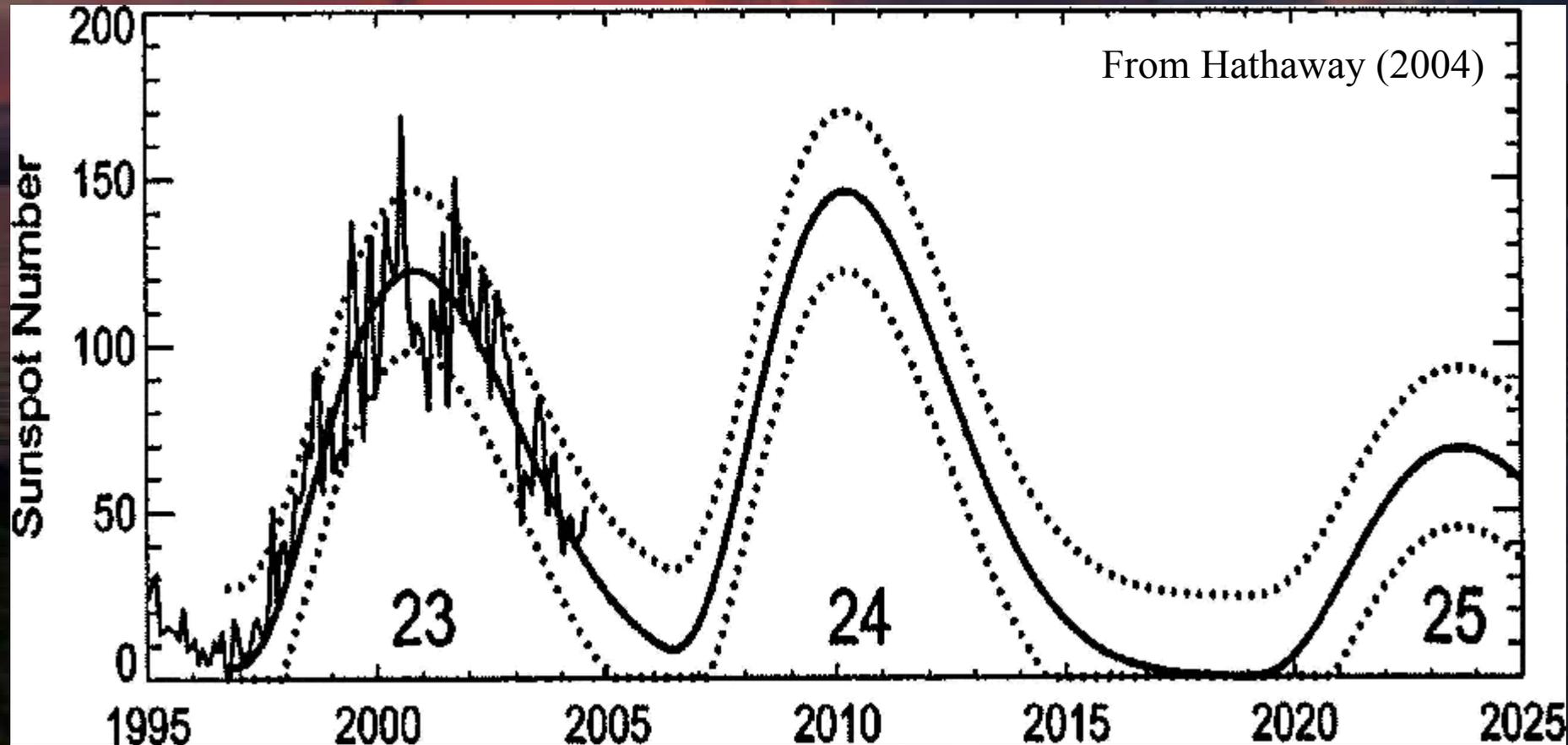
From Soon (2004)

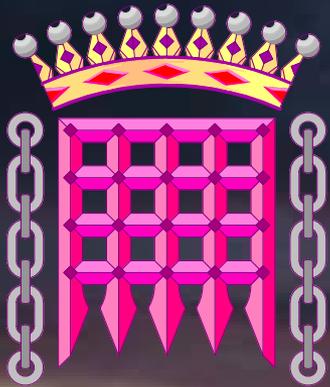
Temperature rose 2.2 °C in the 35 years 1700-1735.



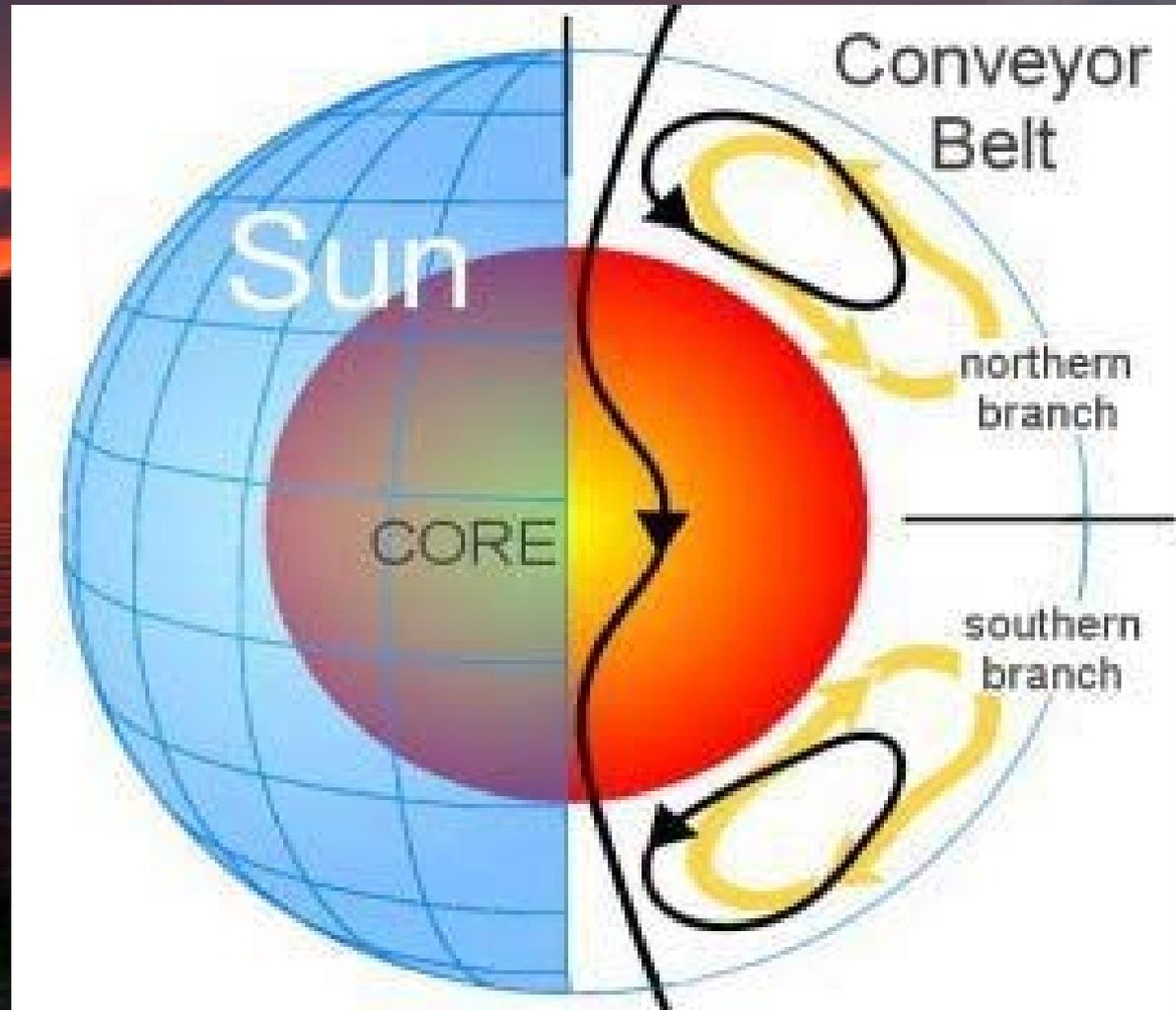


Within 10 years, solar cooling will begin ...

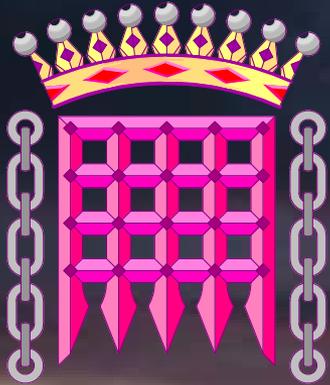




... as the solar magnetic conveyor belts go slow

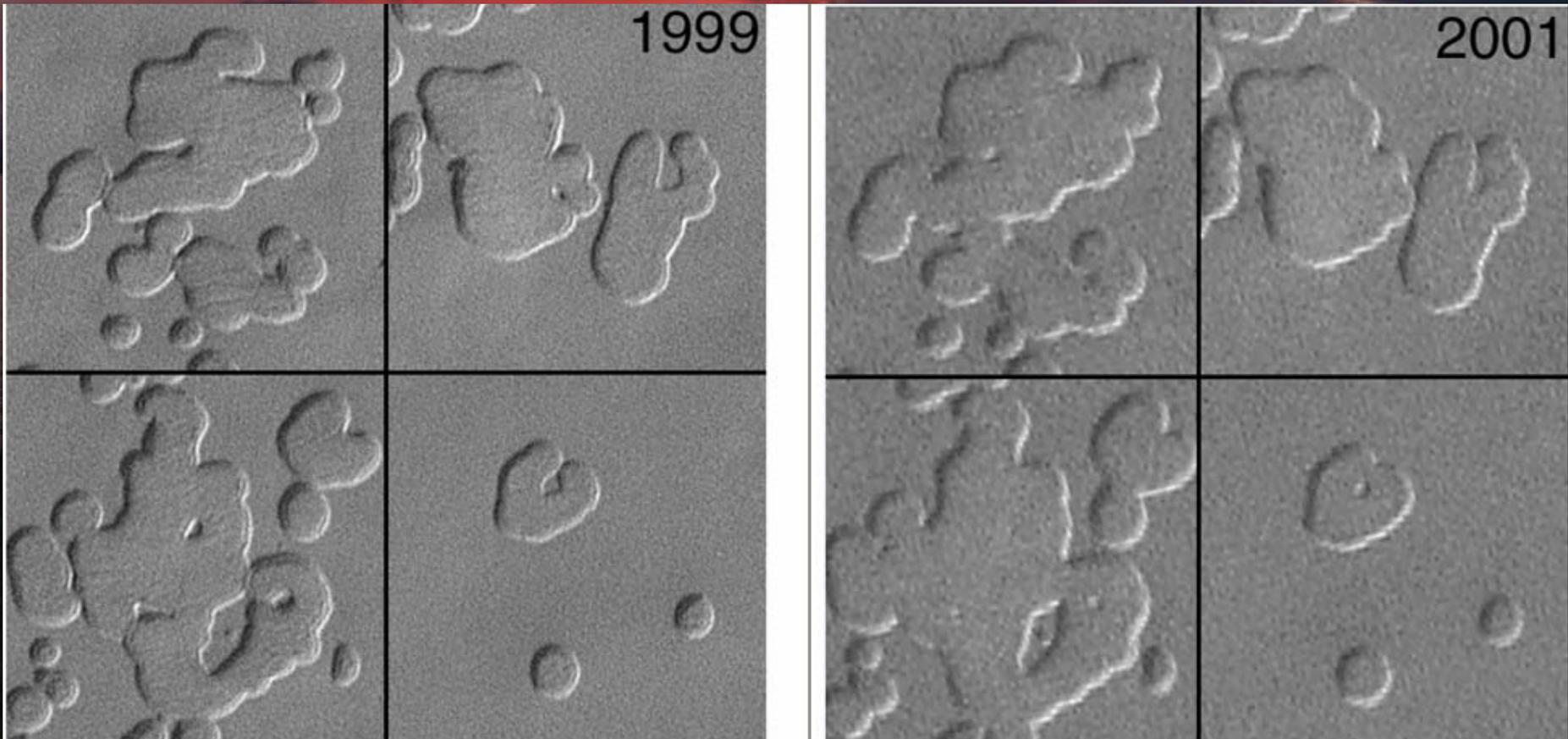


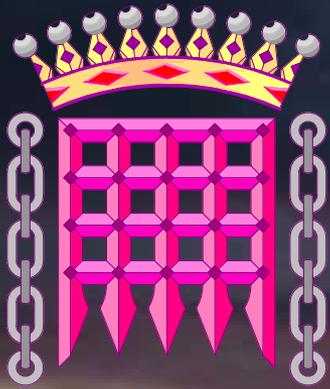
From NASA



Global warming is happening on Mars

From NASA





2004 International Astronomical Union Symposium

Solar changes cause most climate change

Solar cycles are 11, 80 and 200 years long

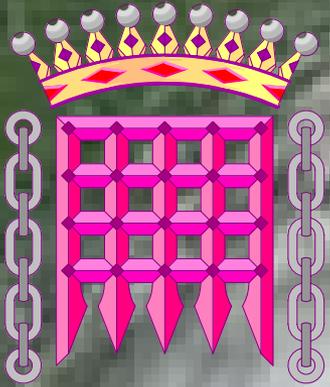
The Sun caused today's global warming

Today's warming is normal, not unusual

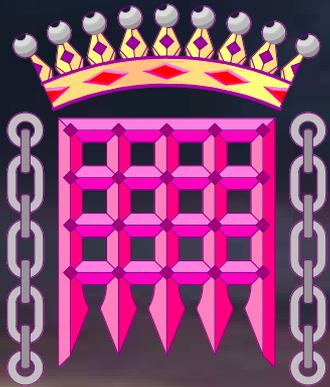
Today's global warming will end soon



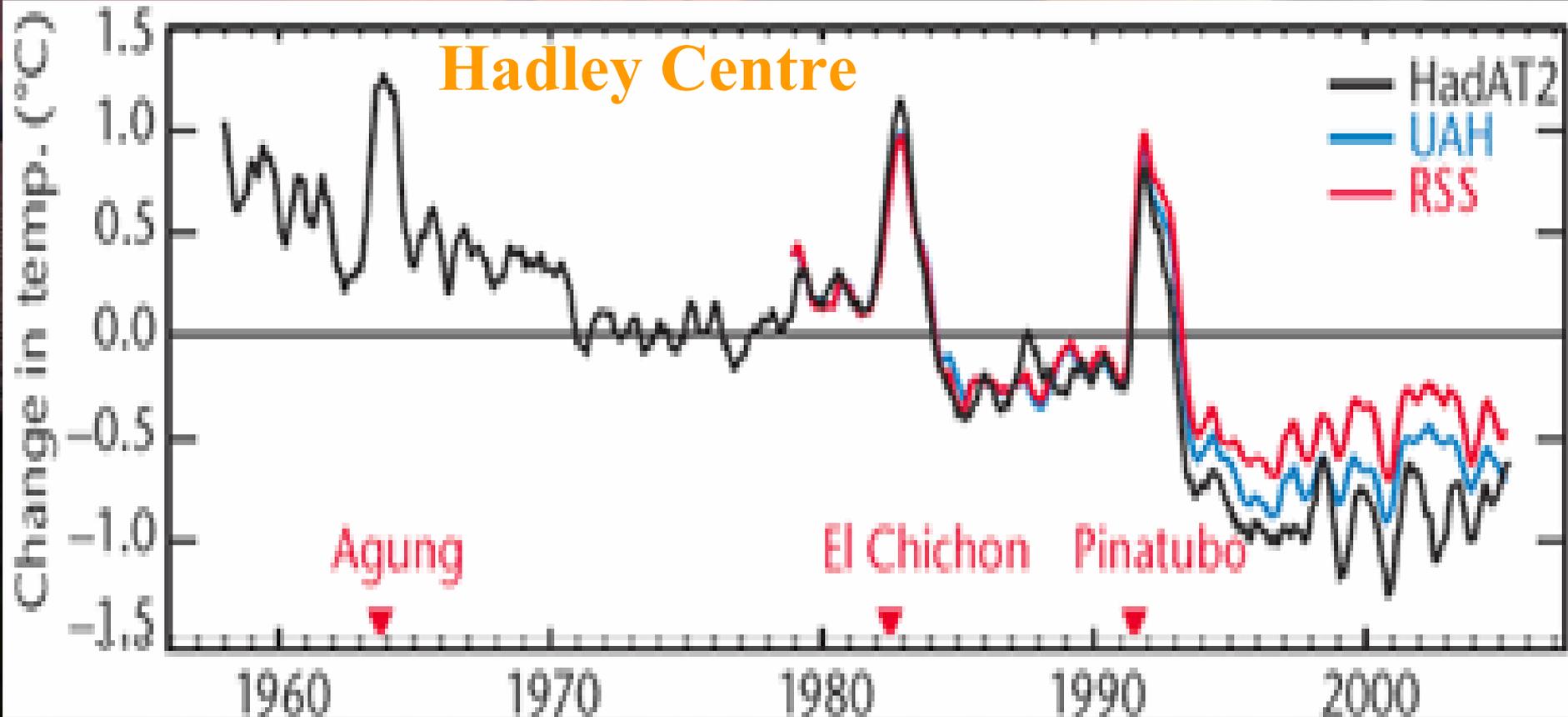
**Man or
nature?**

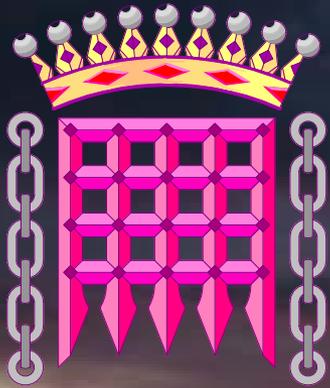


**Where can
we find the
fingerprint
of man-
made
warming?**

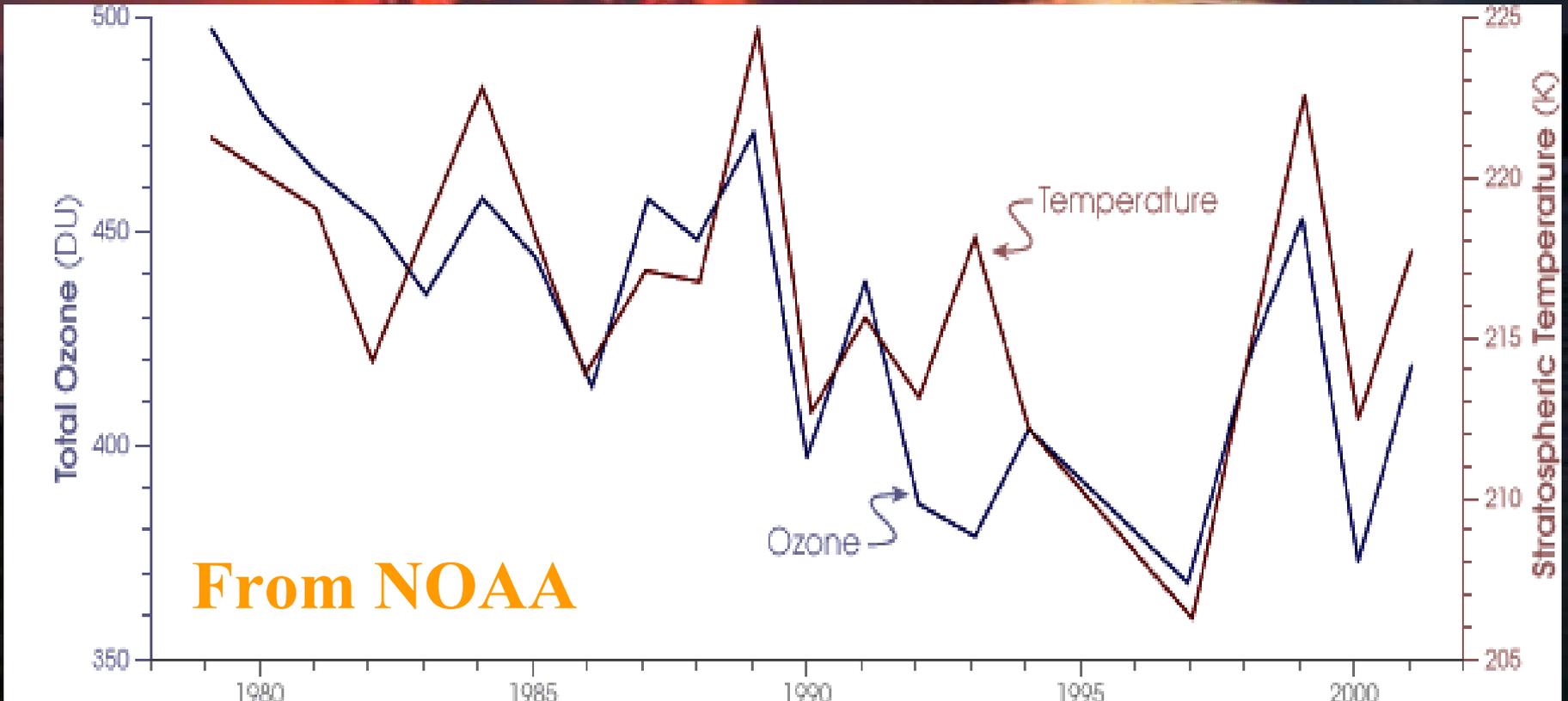


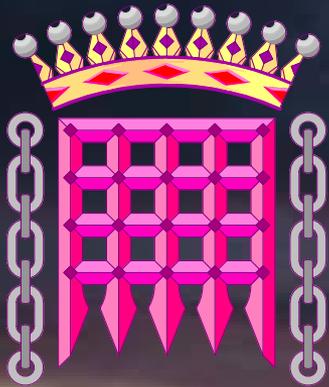
Stratospheric cooling ceased in 1995, but CO₂ continued to increase





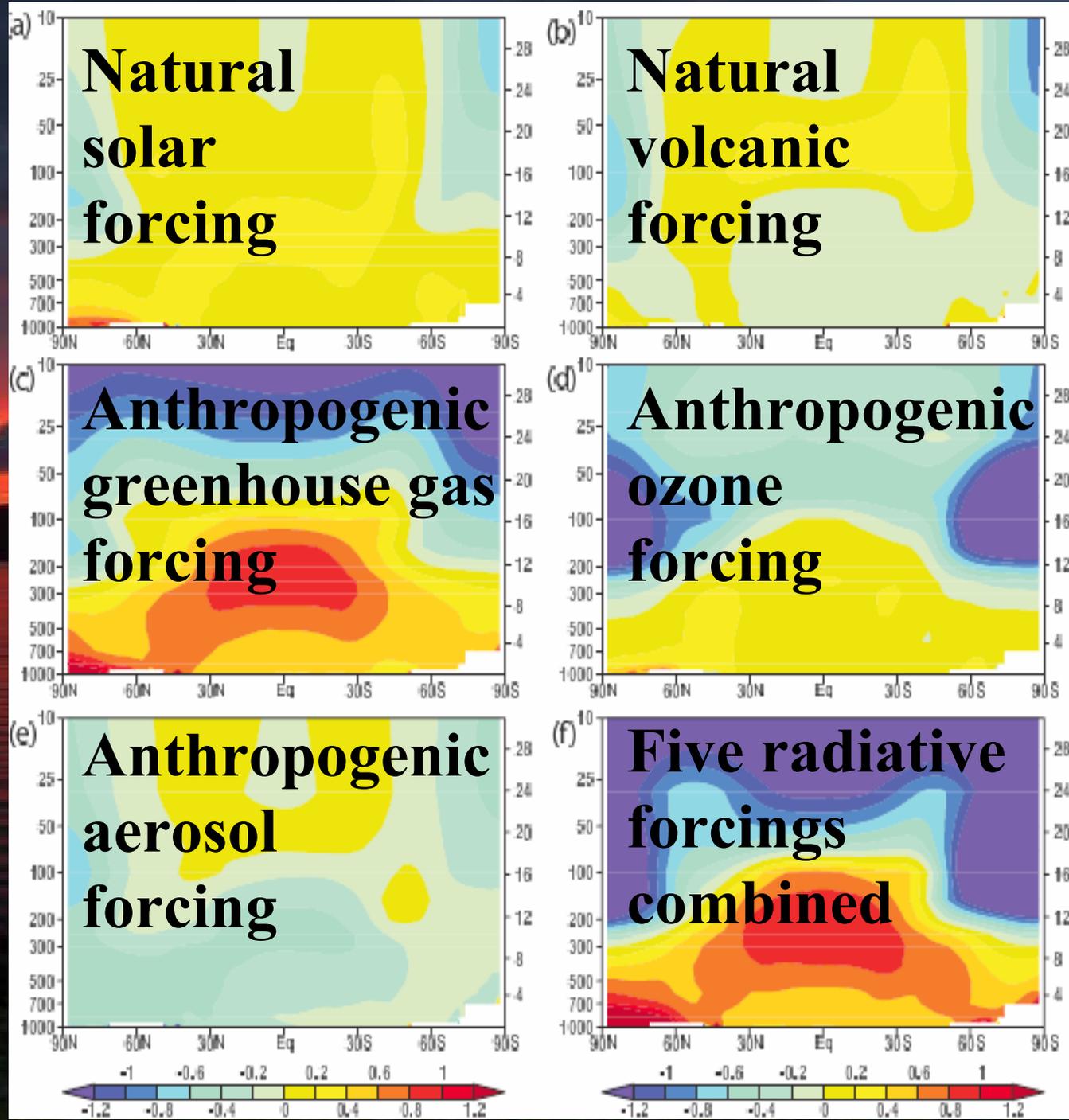
Stratospheric cooling tracks trends in ozone concentration, not CO₂

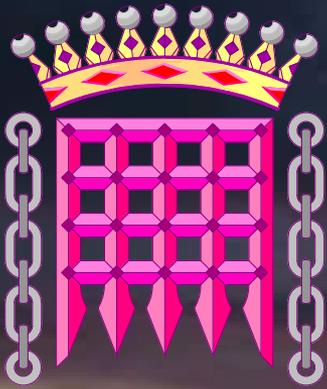




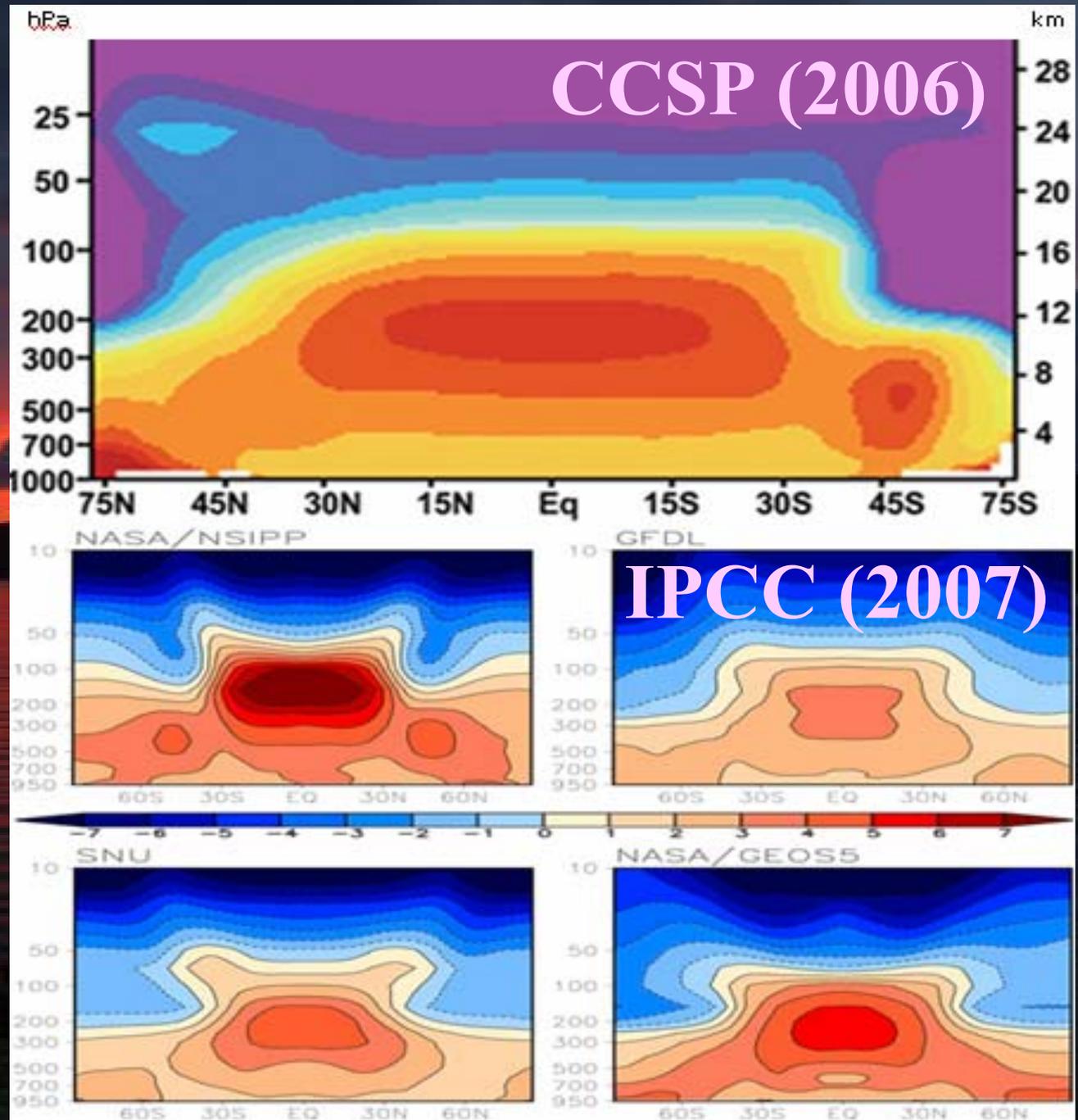
Spot
the
“hot
spot”

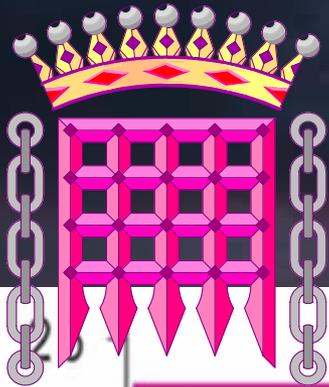
IPCC (2007)





Models
predict
the “hot
spot” ...

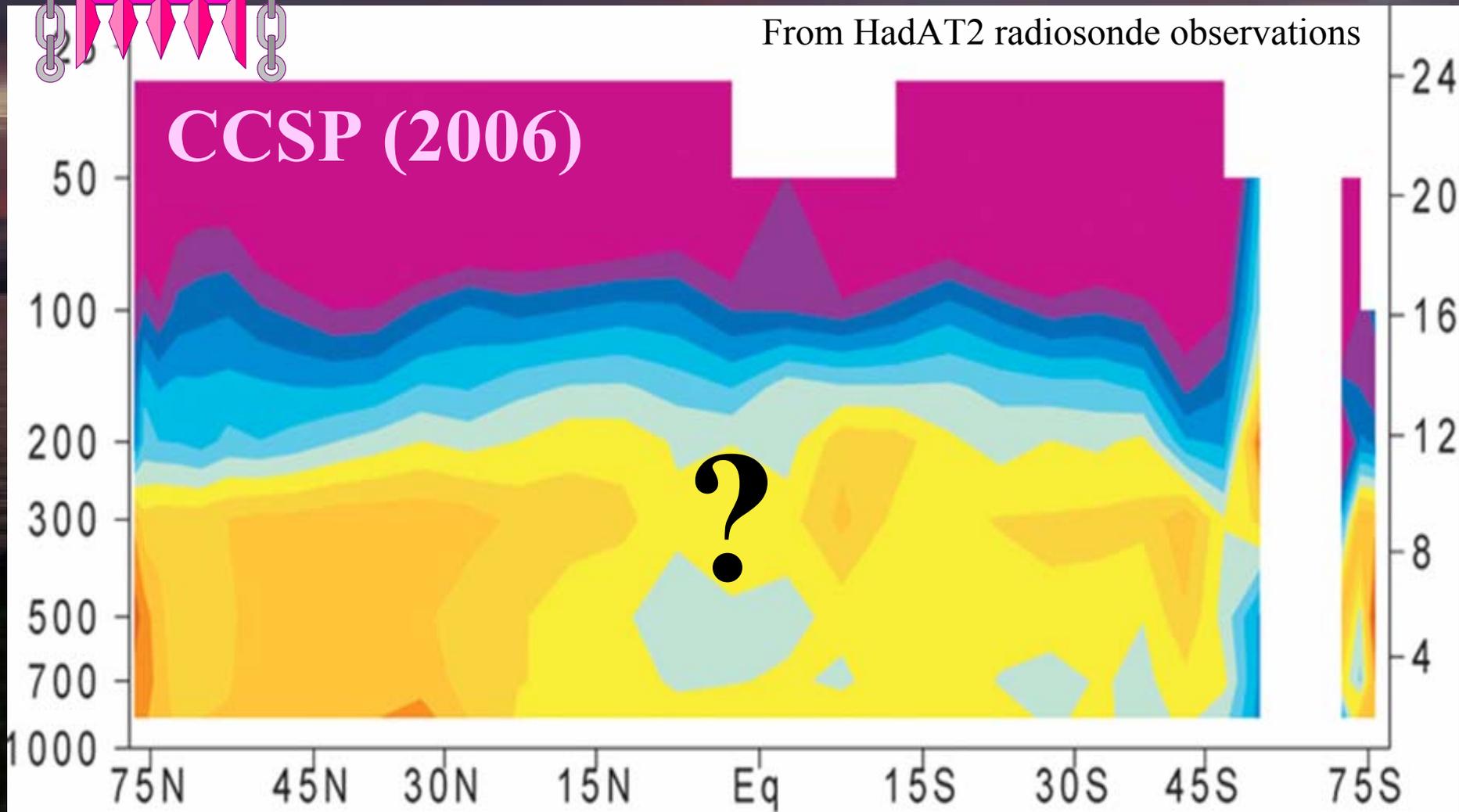


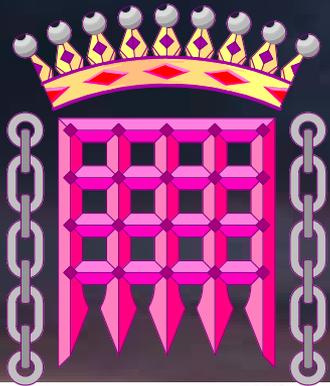


... but in observed reality
the “hot spot” is absent:

From HadAT2 radiosonde observations

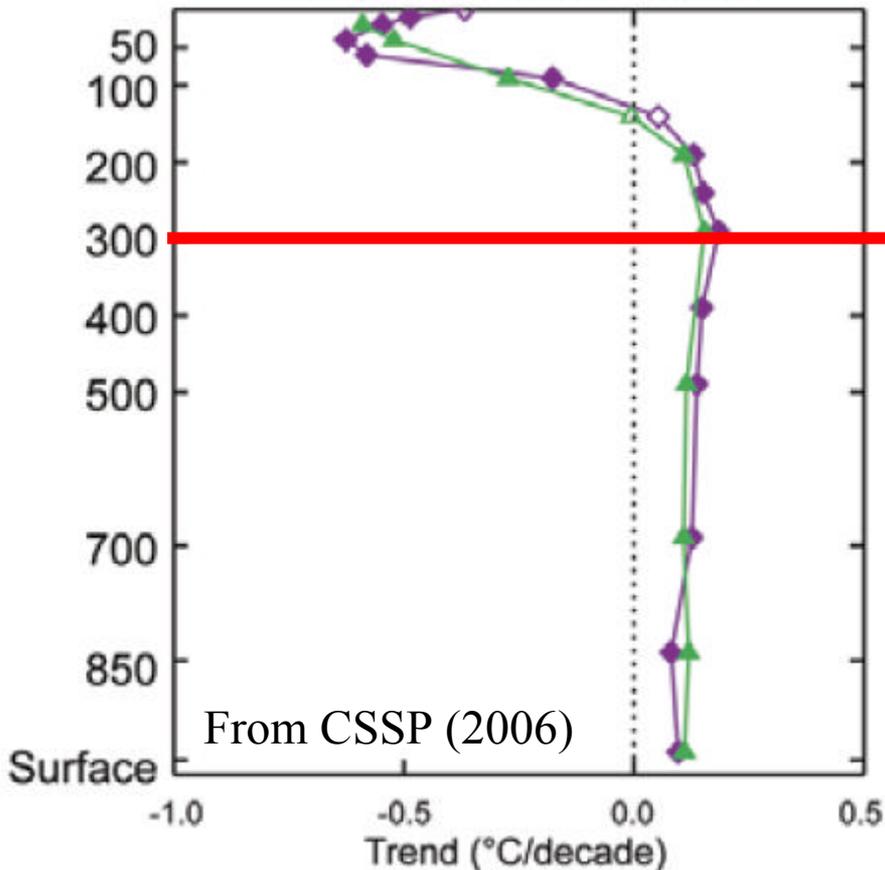
CCSP (2006)



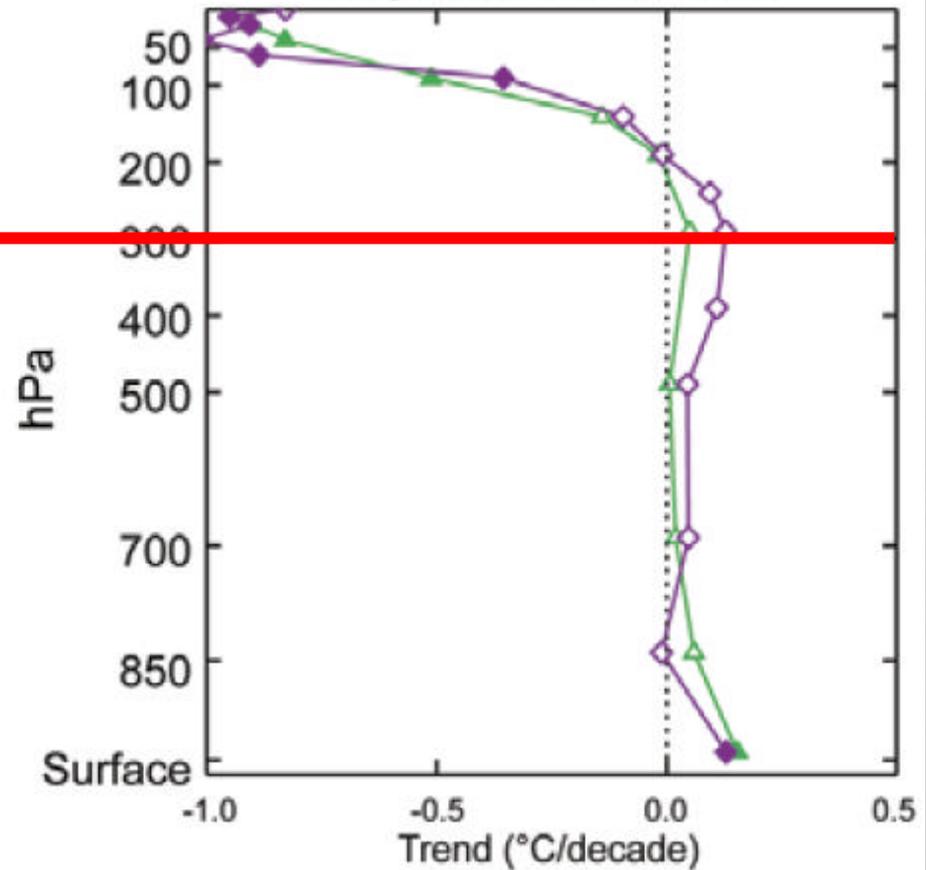


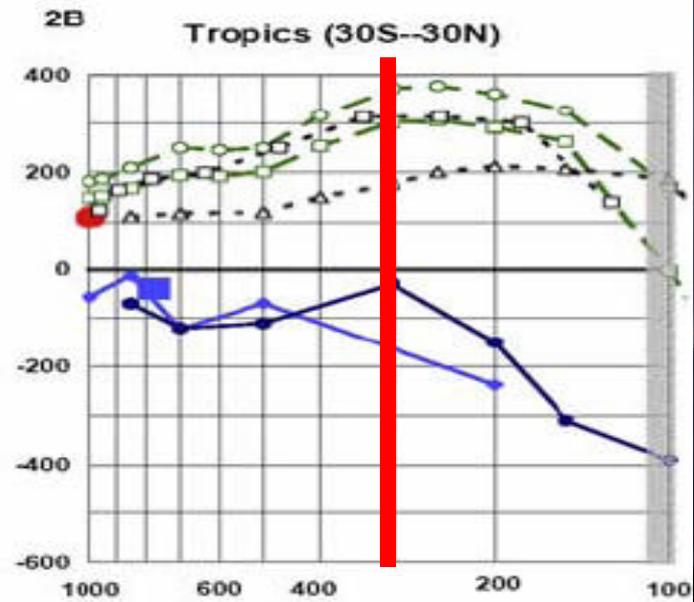
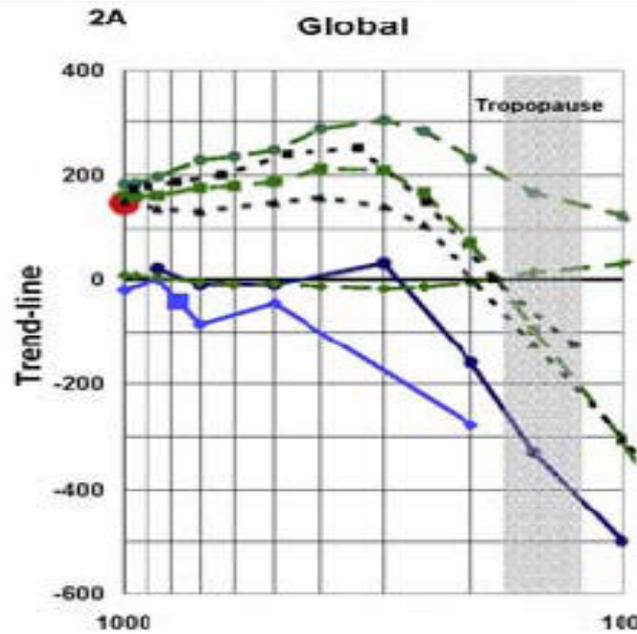
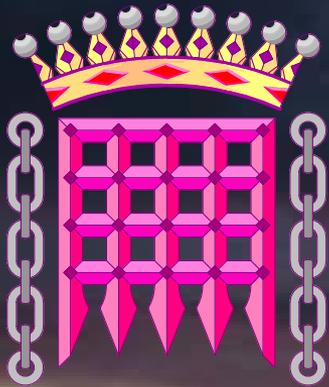
The **hot** spot is too small to cause much warming

Tropical, 1958-2004



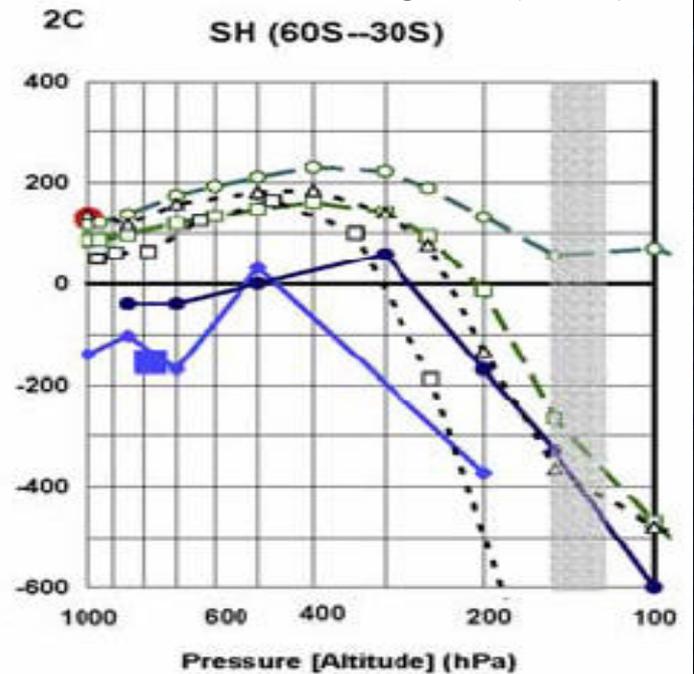
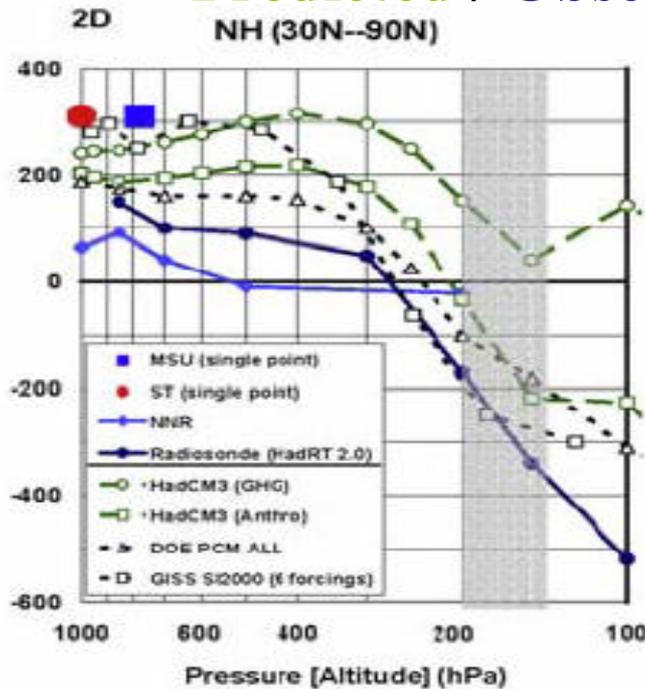
Tropical, 1979-2004



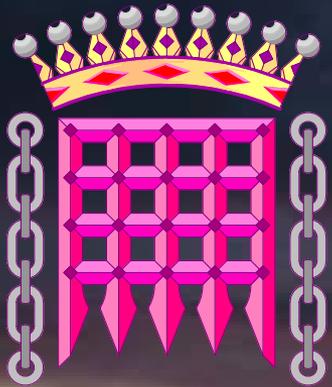


Predicted / Observed

From Douglass (2004)



Hot
Spot?
Not!



... and the outputs
for 1979-2004 ...

<i>dT</i> (°C)	S.H.	Trop	N.H.
mi. Latitude	90S-30S	10S-10N	30N-90N
1-6 R.sondes	-0.15	-0.50	+0.40
0-5 Sat.MSU	+0.05	+0.15	+0.75
Sfc HadCRU	+0.35	+0.40	+0.80

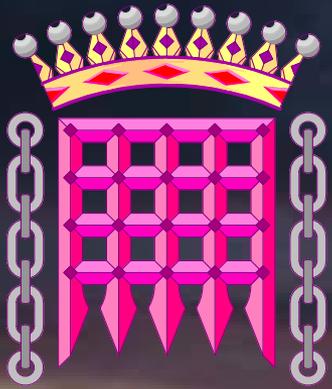


... no “hot spot”, so
no CO₂ fingerprint

<i>Predicted by models</i>	<i>Observed</i>	<i>Result</i>
Satt. tropi. > sfc. tropi.	< sfc. tropi.	FAIL
Rad. tropi. > SH	< SH	FAIL
Rad. tropi. > NH	< NH	FAIL
Rad. tropi. > sat. tropi.	< sat. tropi.	FAIL
Rad. tropi. > sfc. tropi.	< sfc. tropi.	FAIL



**Why computer
models must fail**



the 1940-1975 temperature fall
the 1957-2007 Antarctic cooling
the 1993-2003 Greenland ice growth
the amplitude of the 1998 El Nino

The the amplitude of *any* El Nino

IPCC the recent methane flatlining

the 2003-2005 ocean temp flatlining

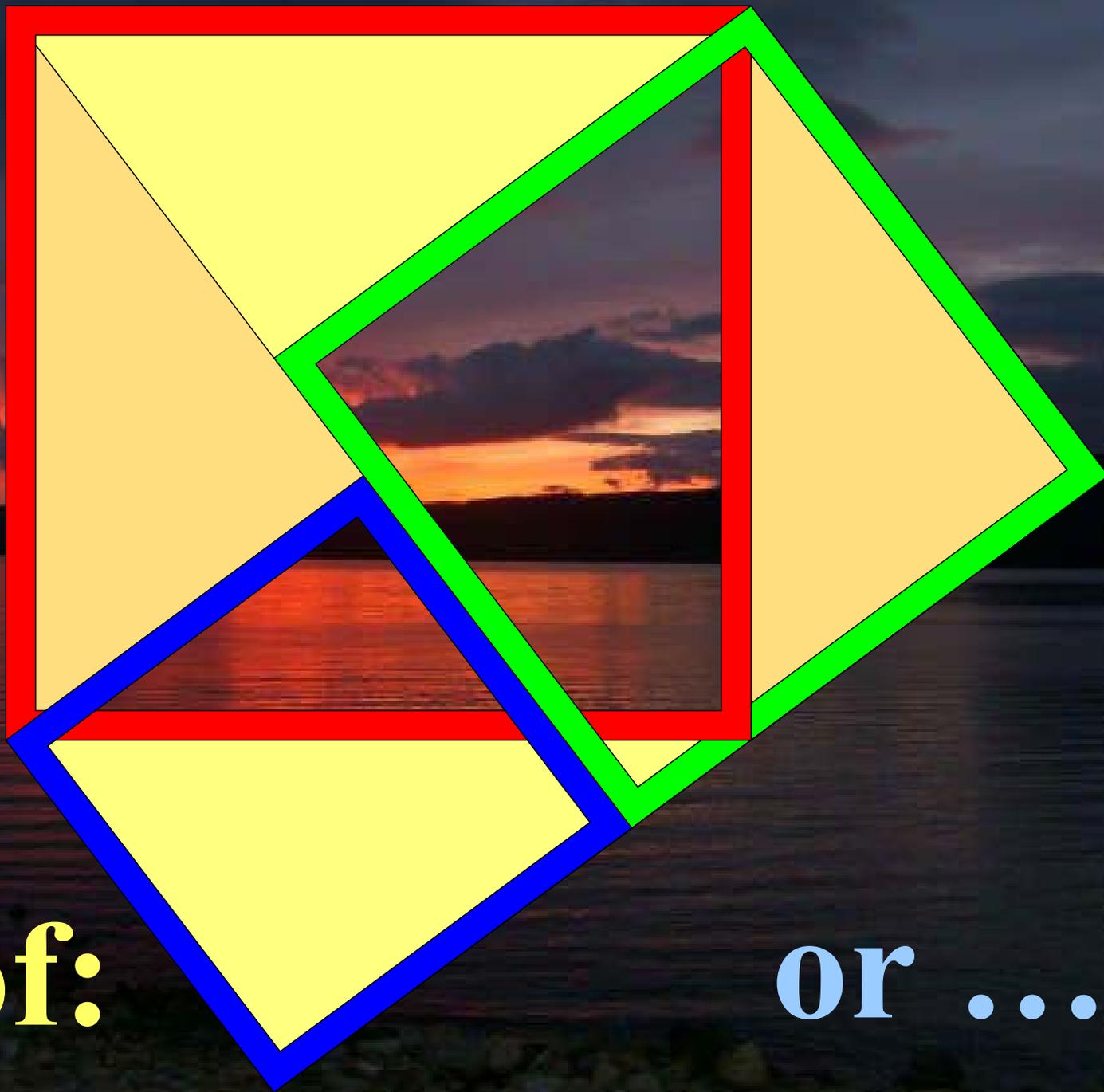
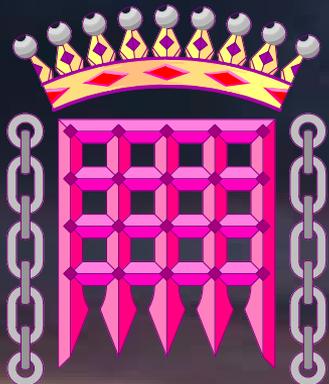
models the active 2004 hurricane season

failed the inactive 2006 & 2007 seasons

the prolonged 2006 solar minimum

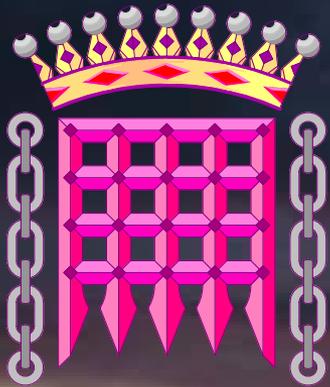
to the UK flooding of 2007

predict the post-1998 temperature flatline



Proof:

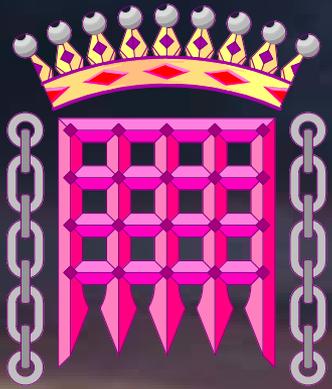
or ...



CHAOS!

“Prediction of the sufficiently distant future is impossible by any method, unless the present conditions are known exactly. In view of the inevitable inaccuracy and incompleteness of weather observations, precise, very-long-range weather forecasting would seem to be non-existent.”

Lorenz (1963)

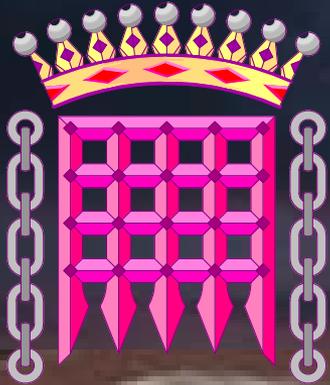


Even what looks like a
simple chaotic equation ...

$$f(z) = z^2 + c$$

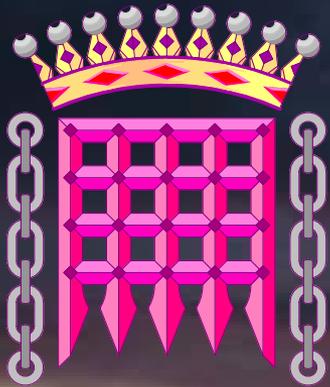
... may have a complex output!



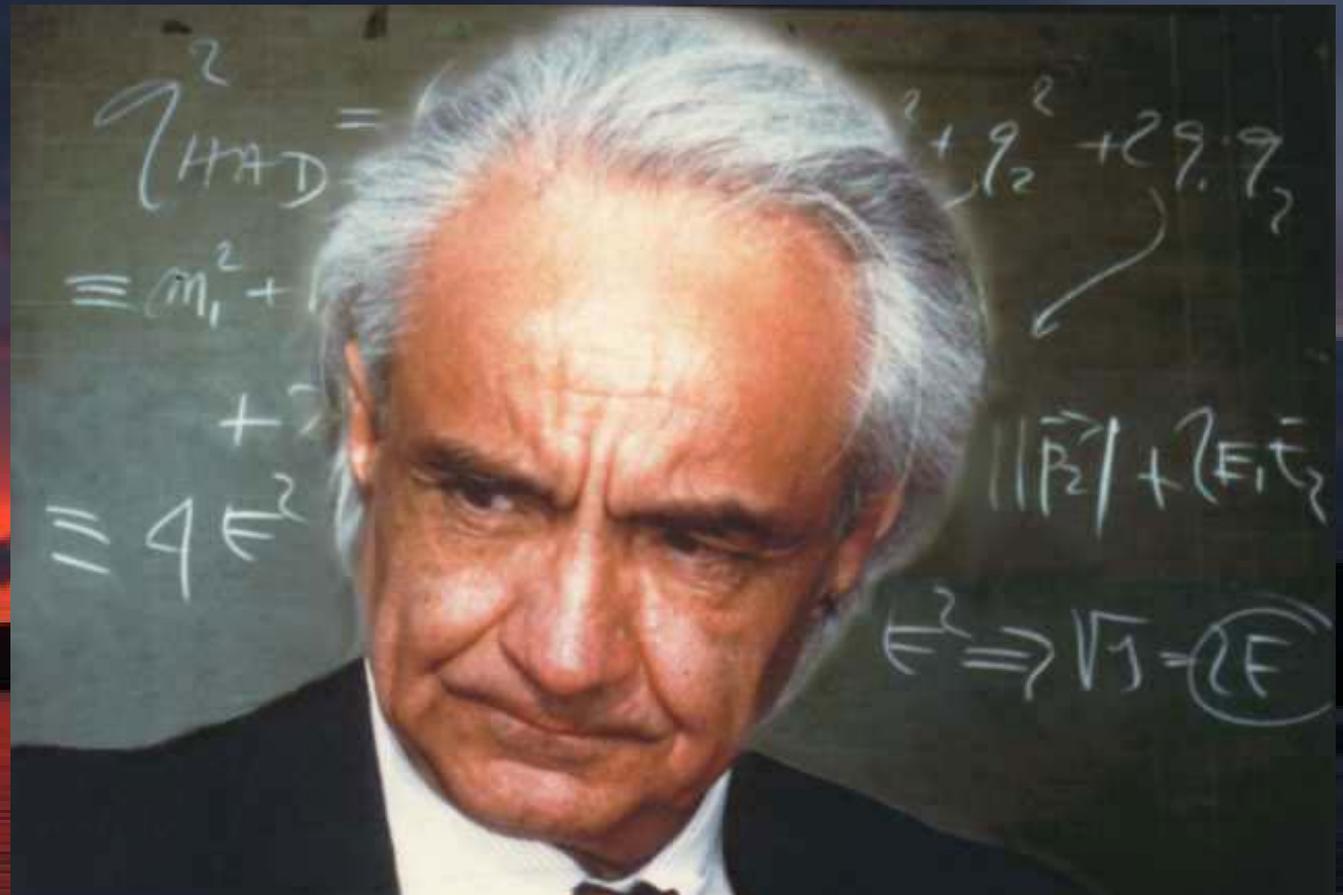


“No supercomputer, no matter how powerful, is able to prove definitively a simplistic hypothesis that says the greenhouse effect is responsible for warming.”

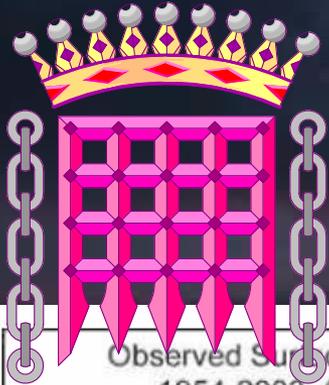
Syun-Ichi Akasofu



**Professor
Antonino
Zichichi**

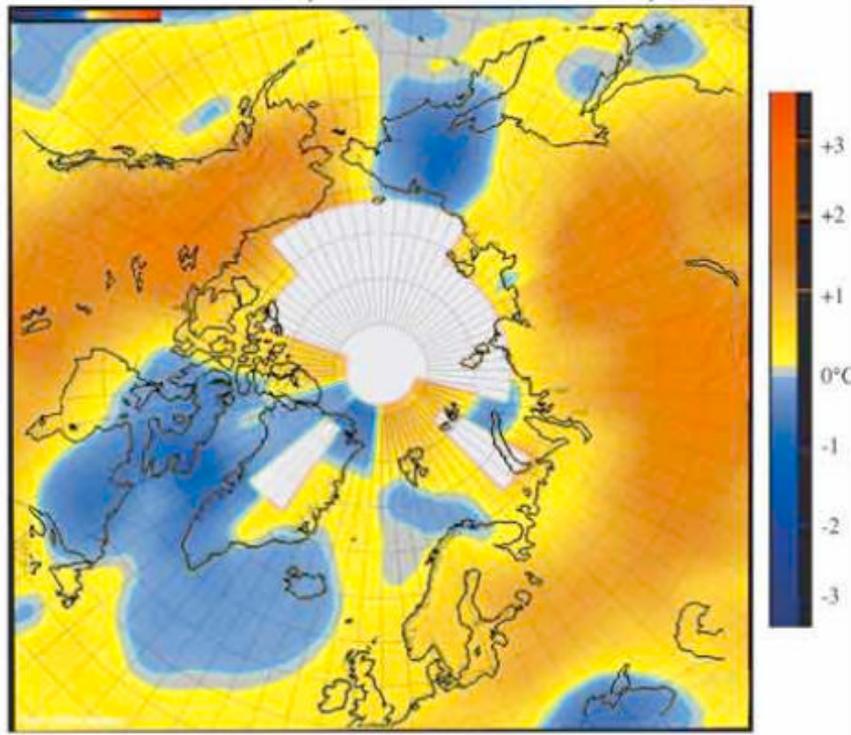


“It is not possible to exclude the possibility that the observed phenomena may have natural causes. It may be that man has little or nothing to do with it.”

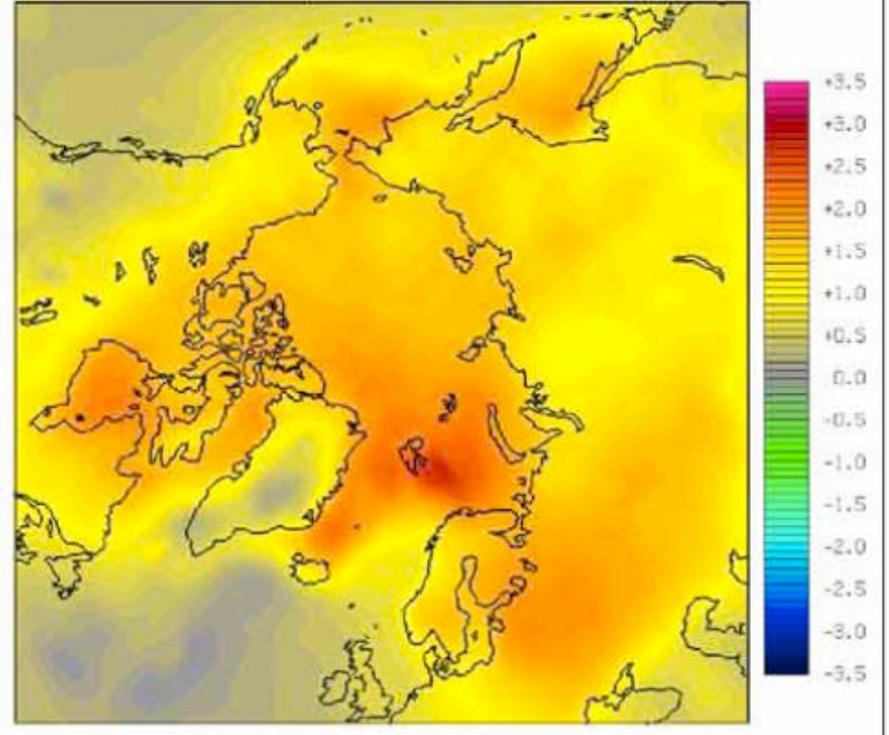


Real world vs. IPCC

Observed Surface Air Temperature Changes:
1954-2003 (WINTER: Dec-Feb in °C)

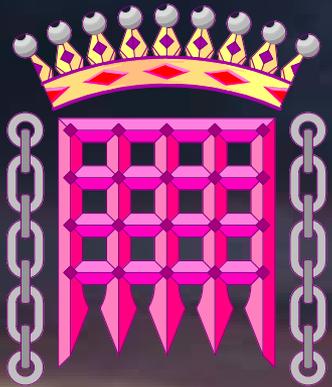


IPCC AR4 14-GCM comp. linear sfc.air.temp.change
1951-2000 (WINTER: Dec-Feb in °C)



OBSERVED

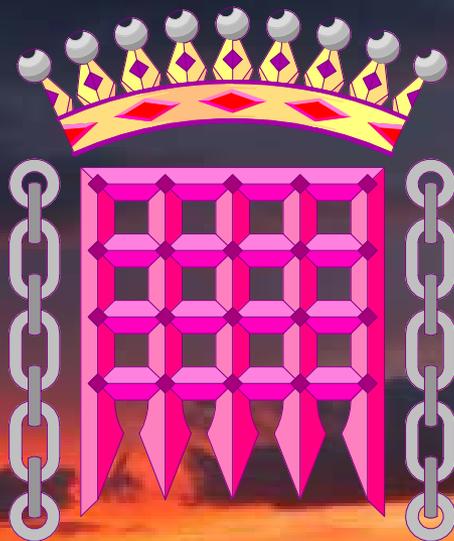
PREDICTED



... and the last word
on climate modeling

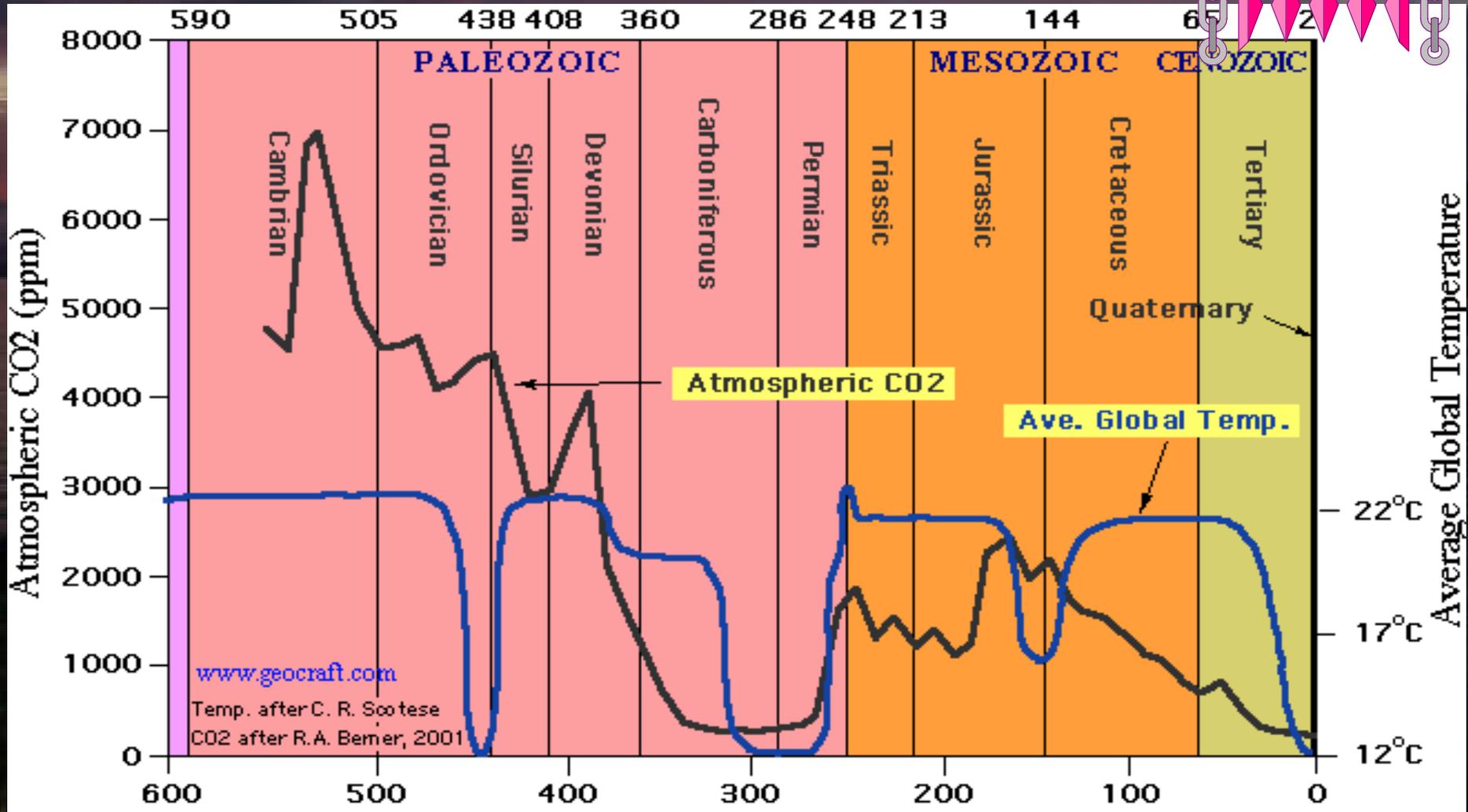
**“In climate research and modeling,
we should recognize that we are
dealing with a coupled non-linear
chaotic system, and therefore that
the long-term prediction of future
climate states is not possible.**

IPCC (2001)

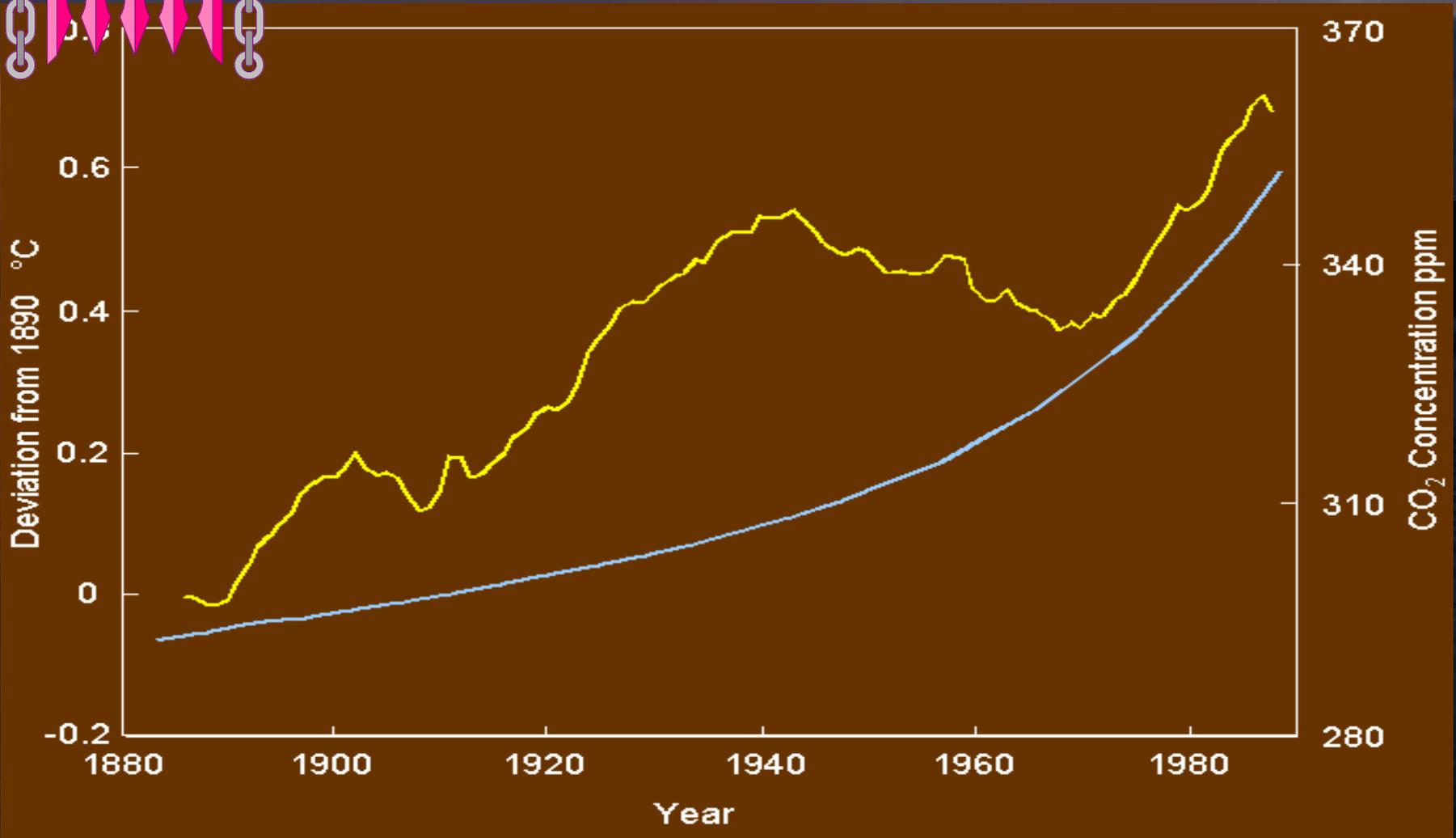
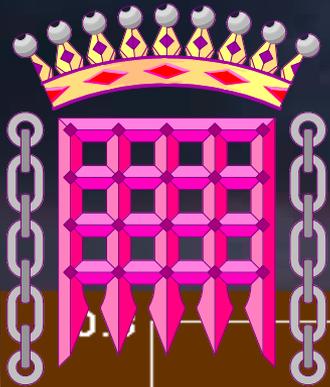


The limits of CO₂'s power

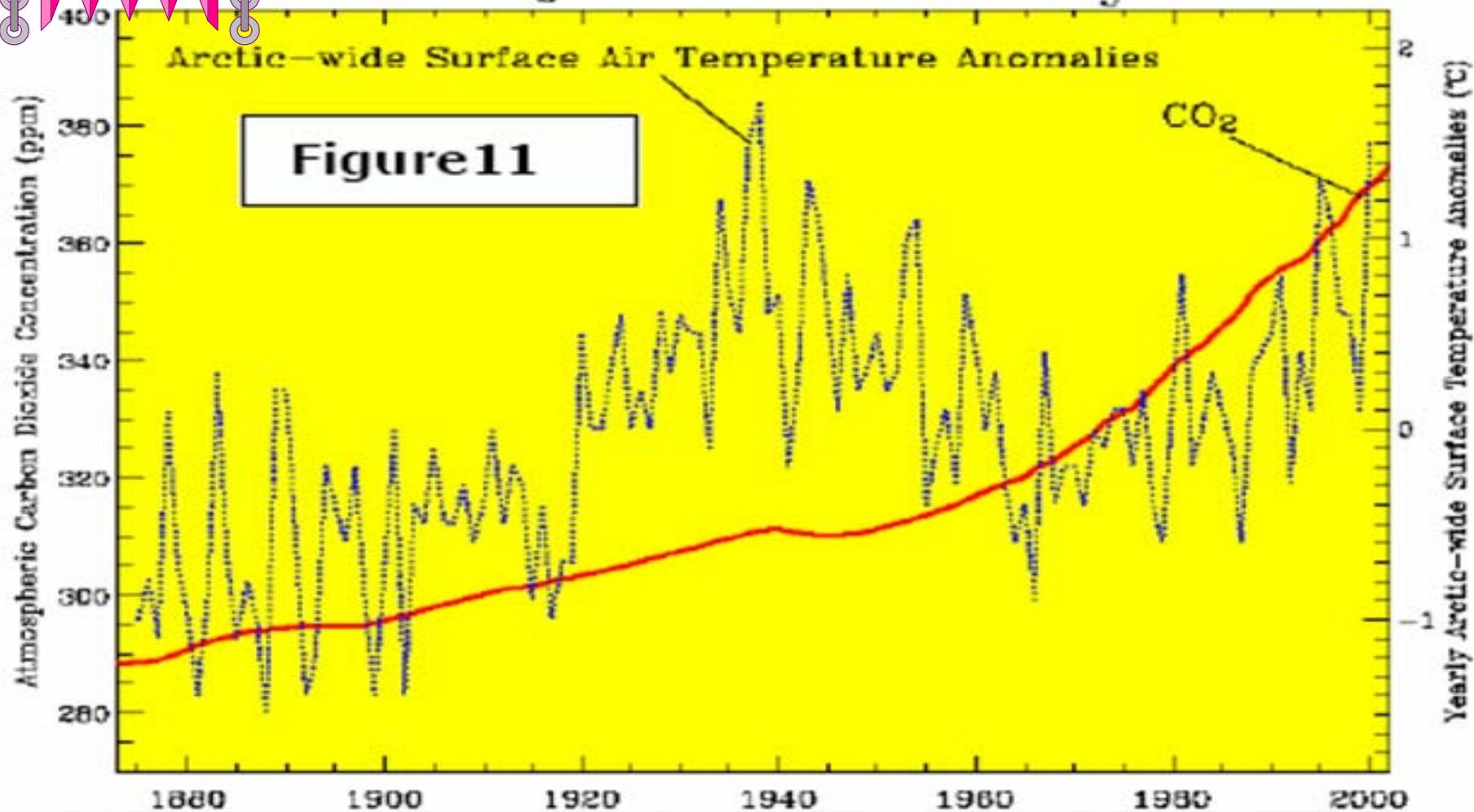
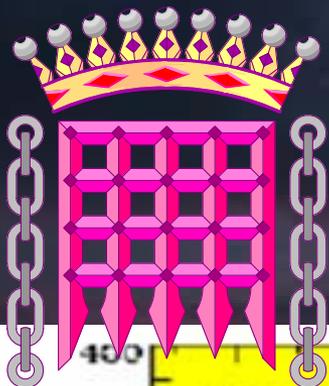
Temperature doesn't track palaeo-CO₂

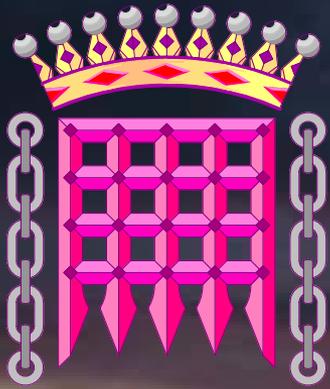


Temperature doesn't track CO₂ globally



Temperature doesn't track Arctic CO₂





**CO₂ is merely
a trace gas**

CO₂ in the atmosphere

as % by volume

1750

2007

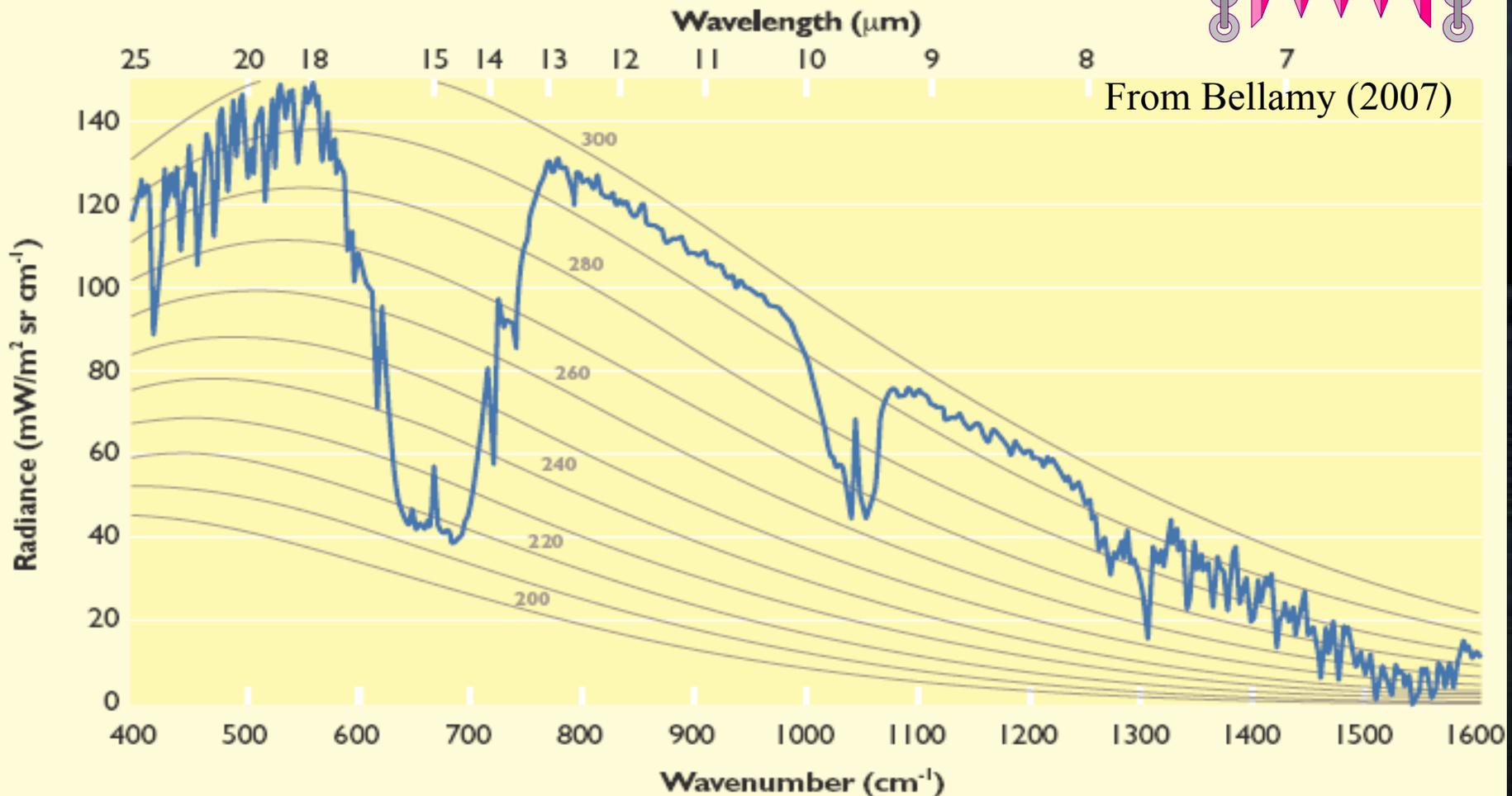
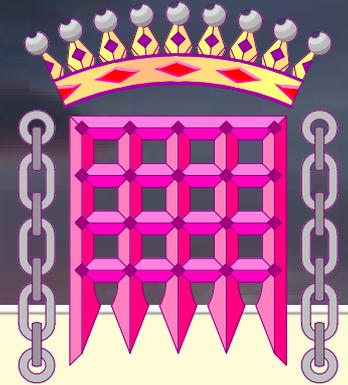
Change

0.03%

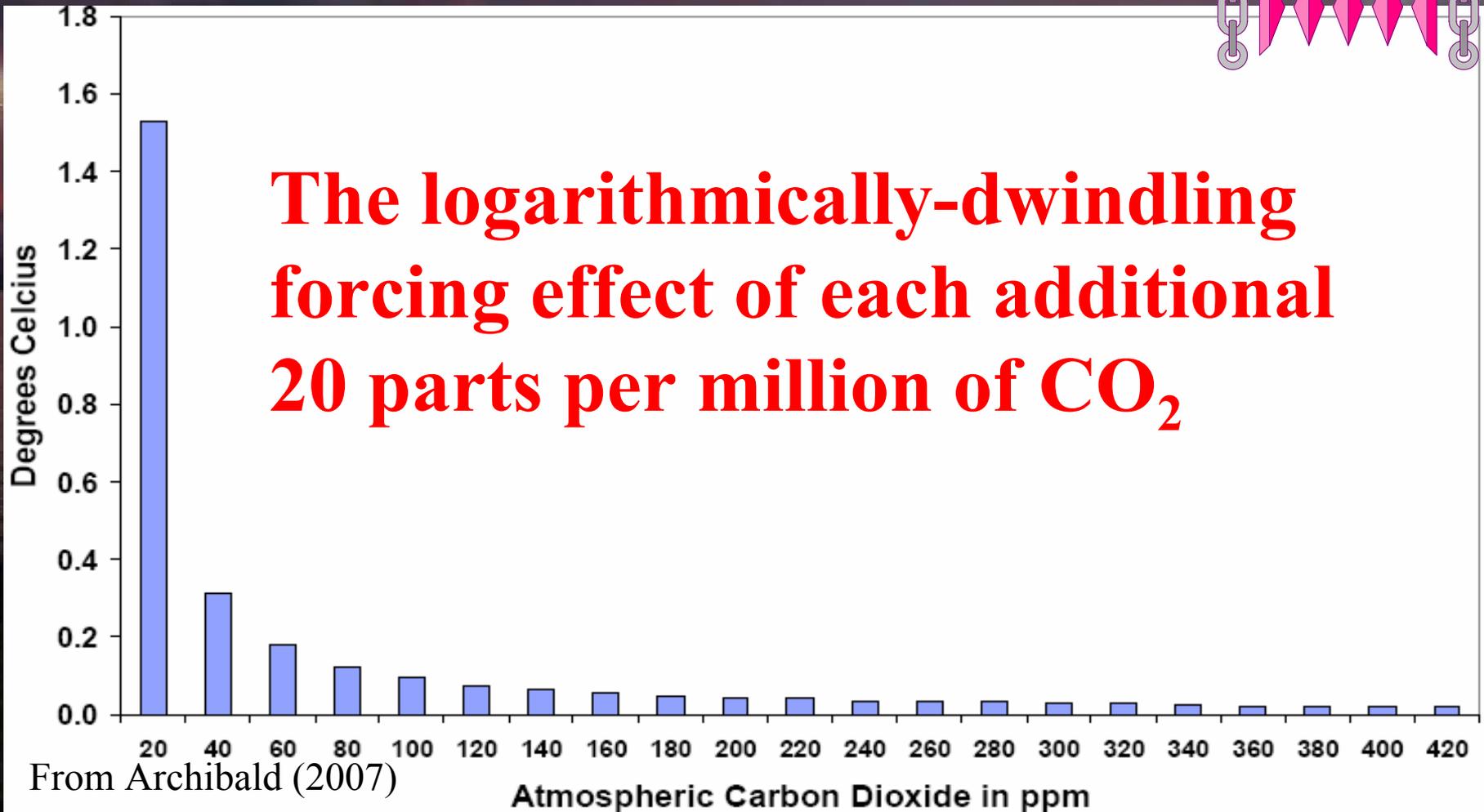
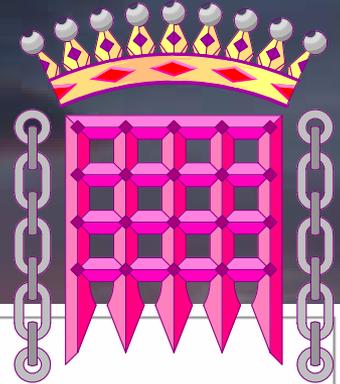
0.04%

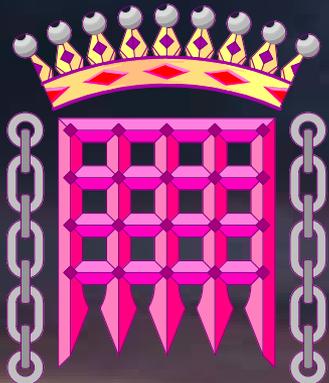
+0.01%

CO₂ has only a few absorption bands, so ...

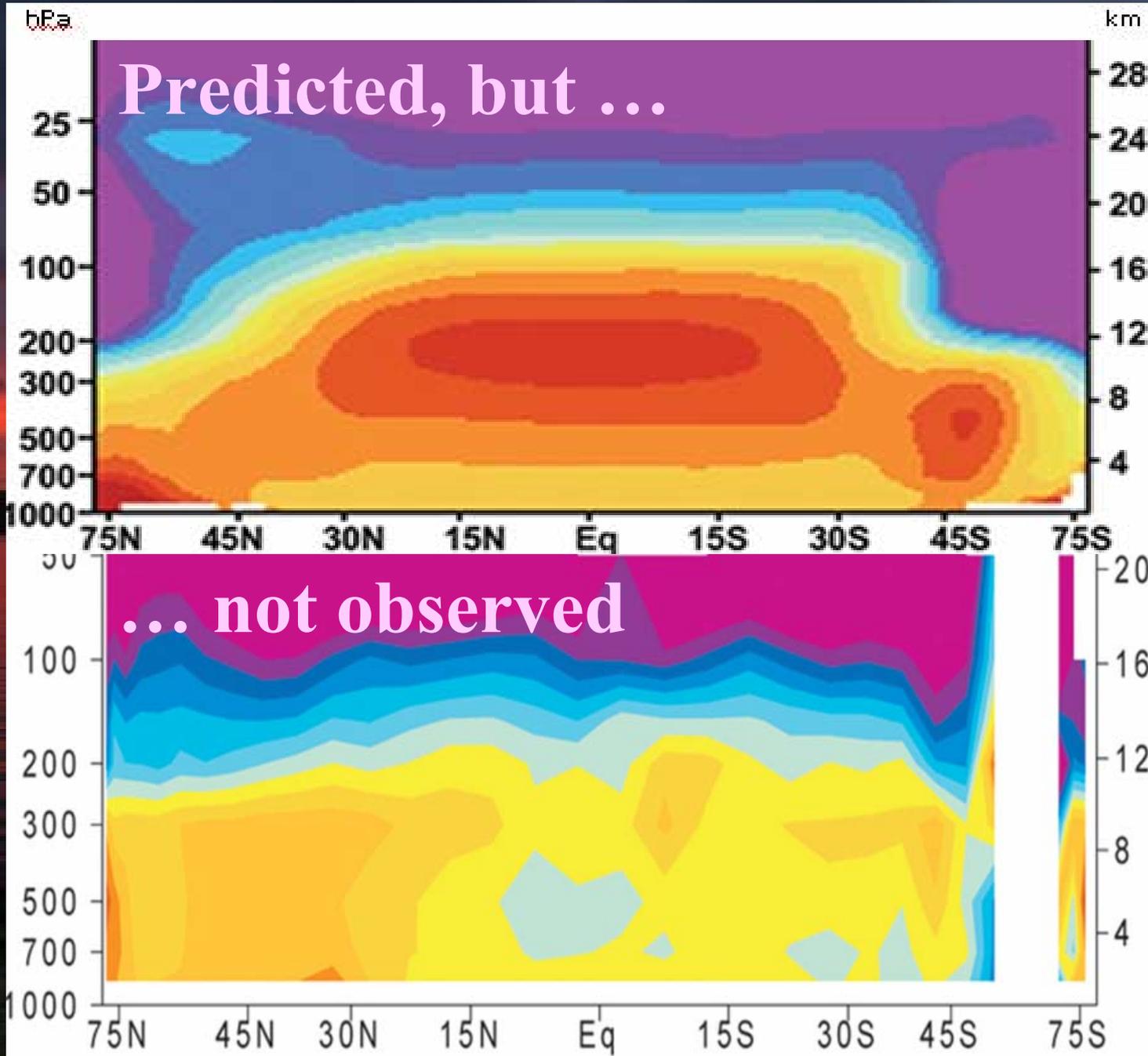


... CO₂ has a diminishing effect on temperature

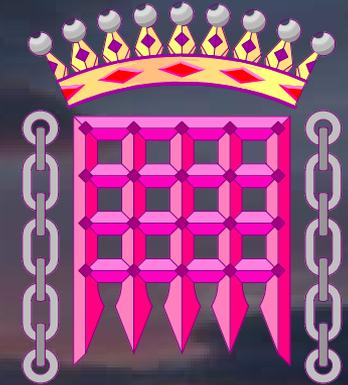




Do
you
see it?
No,
you
don't!

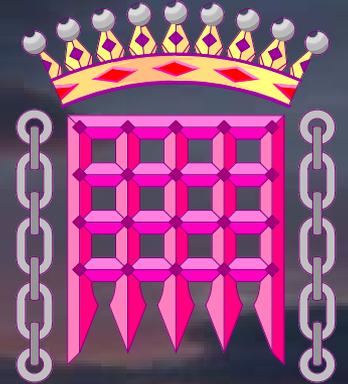


CO₂'s residence time in the atmosphere is short ...



	Years		Years
Arnold+Anderson (1957)	10	Craig (1957)	7
Revelle & Suess (1957)	7	Craig (1958)	7
Ferguson (1958)	2	Bolin & Eriksson (1959)	5
Broecker (1963)	8	Craig (1963)	10
Bien & Suess (1967)	12	Monnich & Roether (1967)	5
Nydal (1968)	8	Young & Fairhall (1968)	5
Rafter & O'Brian (1970)	12	Machta (1972)	2
Bacastow+Keeling (1973)	7	Keeling (1973)	7
Broecker (1974)	9	Broecker & Peng (1974)	8

... at about 7 years,
it really is short ...



	Years		Years
Oeschger et al. (1975)	8	Peng et al. (1979)	9
Keeling (1979)	8	Broecker et al. (1980)	7
Delibrias (1980)	6	Quay & Stuiver (1980)	8
Siegenthaler et al. (1980)	8	Stuiver (1980)	7
Druffel & Suess (1983)	13	Kratz et al. (1983)	7
Lal & Suess (1983)	15	Peng et al. (1983)	8
Siegenthaler (1983)	8	Siegenthaler (1989)	7
Murray (1992)	5	Segalstad (1992)	5

... that is, unless
you're the IPCC:



“... the time required for the
atmosphere to adjust to a future
equilibrium state if emissions change
abruptly (lifetime of 50-200 years).”

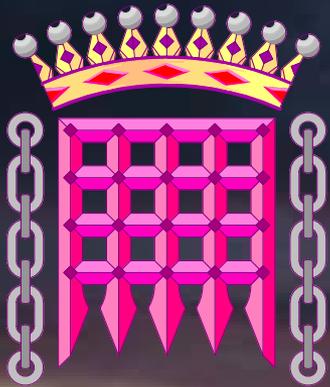
IPCC (1990)



dT: the variable
that decides all

Arrhenius' calculation:

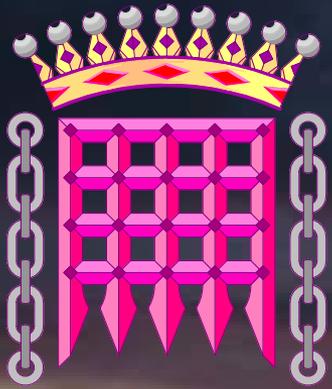
$$dT_{2x} = 1.6 \text{ } ^\circ\text{K}$$



“Likewise, I calculate that a halving or doubling of CO₂ concentration is equivalent to temperature changes of $-1.5 \text{ } ^\circ\text{C}$ or $+1.6 \text{ } ^\circ\text{C}$ respectively.” (1906)



In ähnlicher Weise berechne ich, dass eine Verminderung des Kohlensäuregehalts zur Hälfte oder eine Zunahme desselben auf den doppelten Betrag Temperaturänderungen von $-1,5^\circ \text{ C}$. bzw. $+1,6^\circ \text{ C}$. entsprechen würde.



$$dT_{2x} = dF \kappa f = dF \lambda$$

IPCC (2007)

$$= 3.3 \text{ } ^\circ\text{K}$$

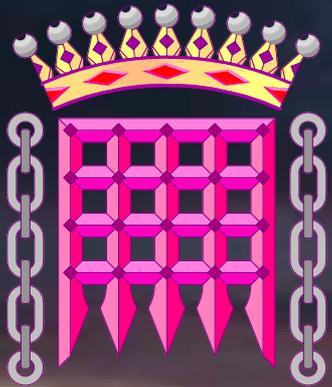
$$dF = 5 \ln(2) \quad 3.466 \text{ W m}^{-2}$$

$$\kappa_j = T_j / [S(1-\alpha)] \quad 0.313 \text{ K W}^{-1}\text{m}^2$$

$$b = \lambda_1 + \lambda_2 + \lambda_3 + \dots \quad 2.160 \text{ W m}^{-2}\text{K}^{-1}$$

$$f_j = 1 / (1 - b\kappa_j) \quad 3.077 \text{ (unitless)}$$

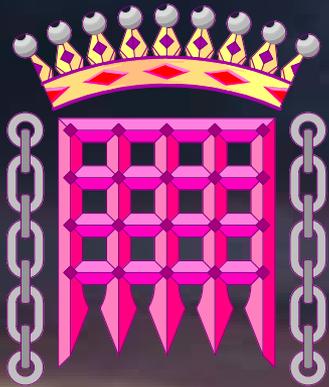
$$\lambda_j = T_j / [S(1-\alpha) - bT_j] \quad 0.962 \text{ K W}^{-1}\text{m}^2$$



IPCC cut CO₂ forcing dF
by a fifth in 12 years ...

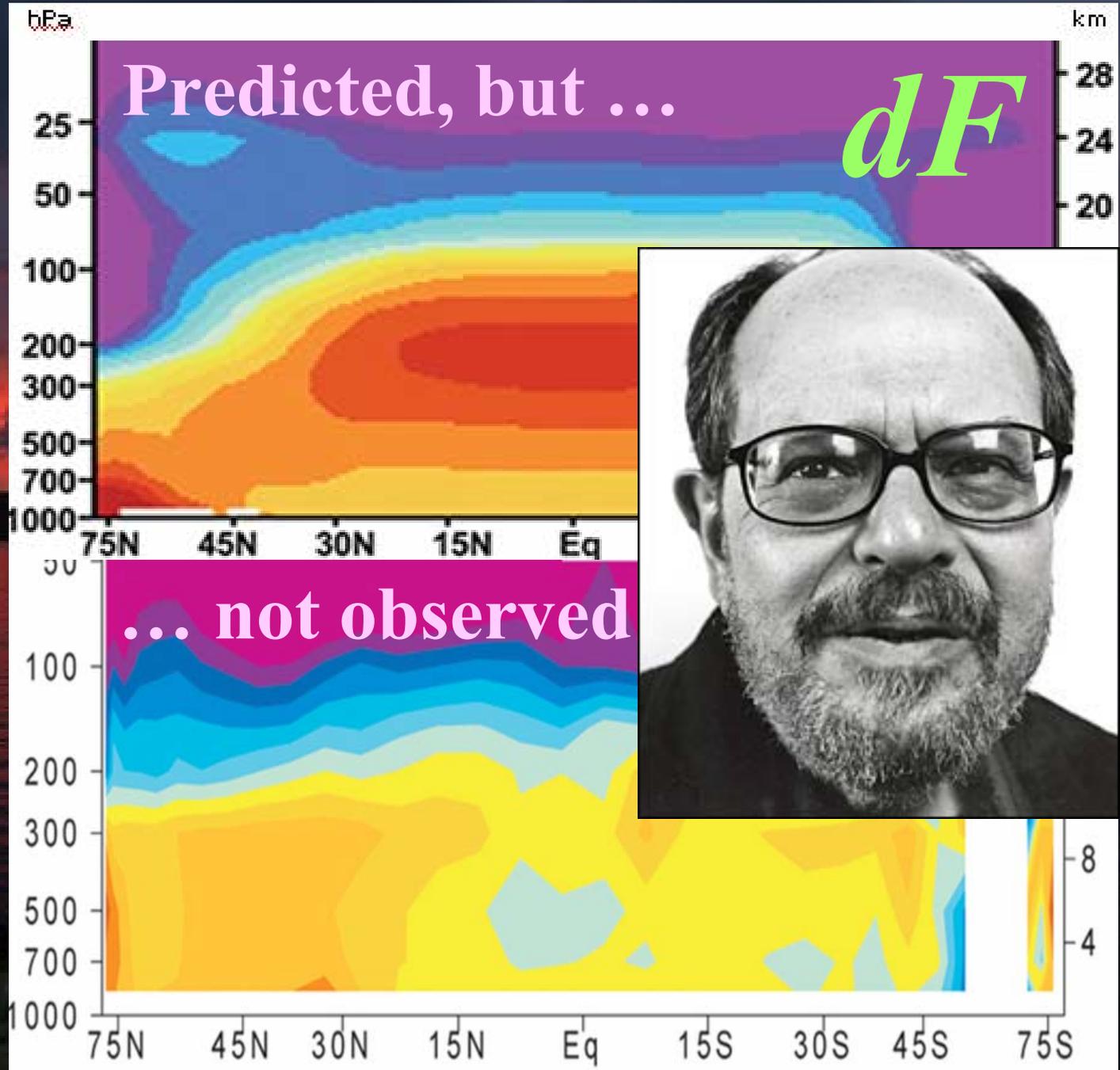
IPCC	$z \ln 2$	dF_{2x}	Sensi.
1995	6.40	4.44 Wm ⁻²	2.5 °K
2001	5.35	3.71 Wm ⁻²	3.0 °K
2007	5.00	3.47 Wm ⁻²	3.2 °K

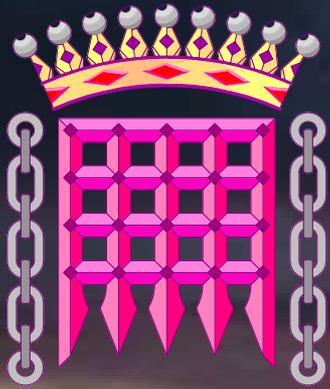
... yet hiked climate sensitivity 25%



“A third
of the
observed
warming
since
1979”

Lindzen (2008)





The value of dF

IPCC

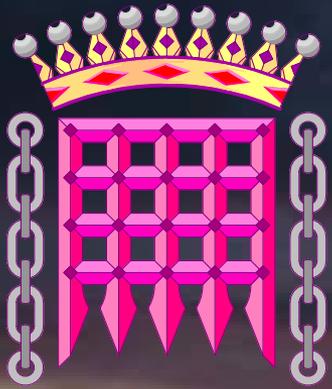
$5 \ln (2)$

3.466 W m^{-2}

Revised

$5 \ln (2) \times \underline{2/3}$

2.310 W m^{-2}



Empirical values of \mathcal{K} , natural & anthropogenic

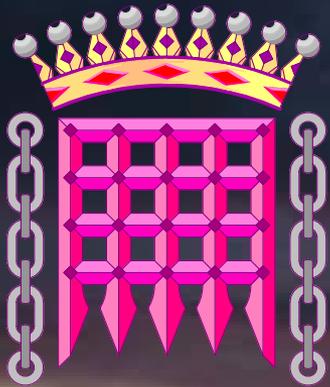
$$^{\circ}\text{K} / \text{W m}^{-2} \approx dT / dF$$

Natural: $20 / 100 \approx 0.2 \text{ }^{\circ}\text{K W}^{-1} \text{ m}^2$

Man-made: $0.9 / 4.5 \approx 0.2 \text{ }^{\circ}\text{K W}^{-1} \text{ m}^2$

Natural greenhouse effect = $20 \text{ }^{\circ}\text{K}$: Houghton (2006)

1990 GHE = 100 W m^{-2} : Kiehl & Trenberth (1997)

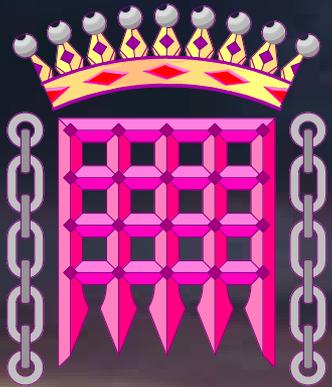


From Stefan-Boltzmann to Einstein ...

$$F = \varepsilon \sigma T^4$$

$$E = mc^2$$

... not mentioned by the IPCC



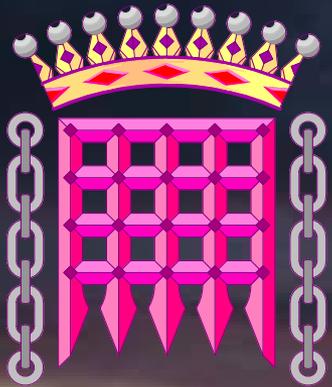
Surface: $T_S / 4F_S = \mathcal{K}_S$:
“true-blackbody” case

No atm. Mean Today

$$T_S = 278.7 \quad 283.3 \quad 288.0 \quad ^\circ\text{K}$$

$$F_S = 342.0 \quad 365.2 \quad 390.0 \quad \text{W m}^{-2}$$

$$\mathcal{K}_S = 0.20 \quad 0.19 \quad 0.18 \quad \text{K W}^{-1} \text{m}^2$$



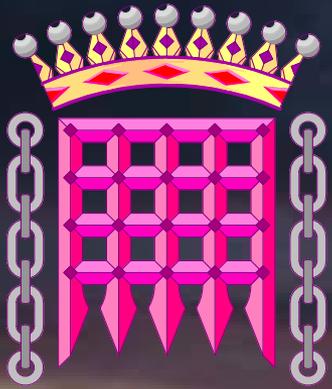
C. E. L.: $T_C / 4F_C = \mathcal{K}_C$:
“true-blackbody” case

No atm. Mean Today

$$T_C = 278.7 \quad 266.4 \quad 254.0 \quad \text{°K}$$

$$F_C = 342.0 \quad 285.4 \quad 236.0 \quad \text{W m}^{-2}$$

$$\mathcal{K}_C = 0.20 \quad 0.23 \quad 0.27 \quad \text{K W}^{-1} \text{m}^2$$



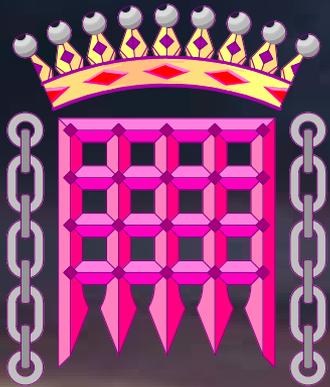
... but IPCC implies κ
is still greater:

$$\text{C.E.L.: } F_C = 236 \text{ W m}^{-2}$$

$$\text{Surface: } T_S = 288 \text{ }^\circ\text{K}$$

$$\kappa_S = dT_S / dF_C = T_S / 4F_C$$

$$\approx 0.31 \text{ }^\circ\text{K W}^{-1} \text{ m}^2$$



The story of \mathcal{K} so far:

$$\mathcal{K} \quad \text{°K} / \text{W m}^{-2} \approx dT / dF$$

$$\text{Surface:} \quad 288 / (4 \times 390) \approx 0.19 \text{ °K W}^{-1} \text{ m}^2$$

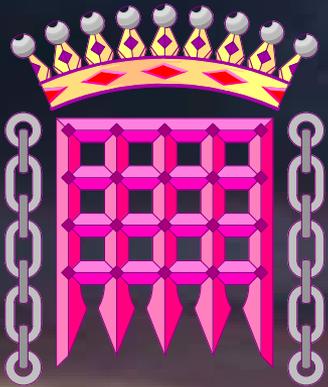
$$\text{Natural:} \quad 20.0 / 100 \approx 0.20 \text{ °K W}^{-1} \text{ m}^2$$

$$\text{Man-made:} \quad 0.90 / 4.5 \approx 0.20 \text{ °K W}^{-1} \text{ m}^2$$

$$\text{Hansen ('84):} \quad 1.25 / 4.7 \approx 0.27 \text{ °K W}^{-1} \text{ m}^2$$

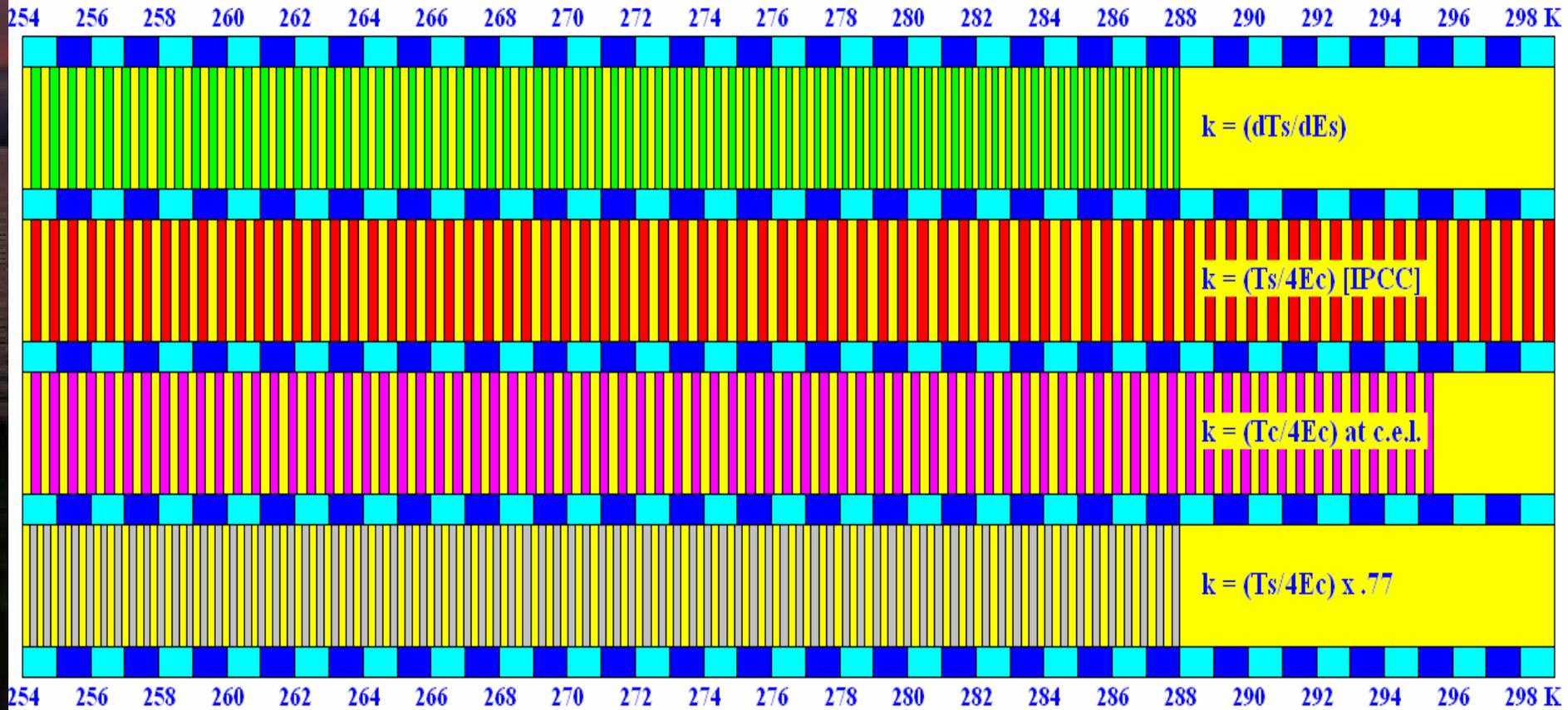
$$\text{Bony (2006) :} \quad 254 / (4 \times 236) \approx 0.27 \text{ °K W}^{-1} \text{ m}^2$$

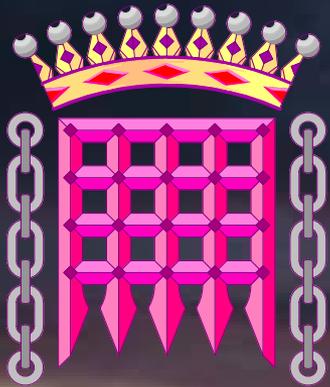
$$\text{IPCC } \kappa_S: \quad 288 / (4 \times 236) \approx 0.31 \text{ °K W}^{-1} \text{ m}^2$$



Exaggeration of κ : the “textbook” case

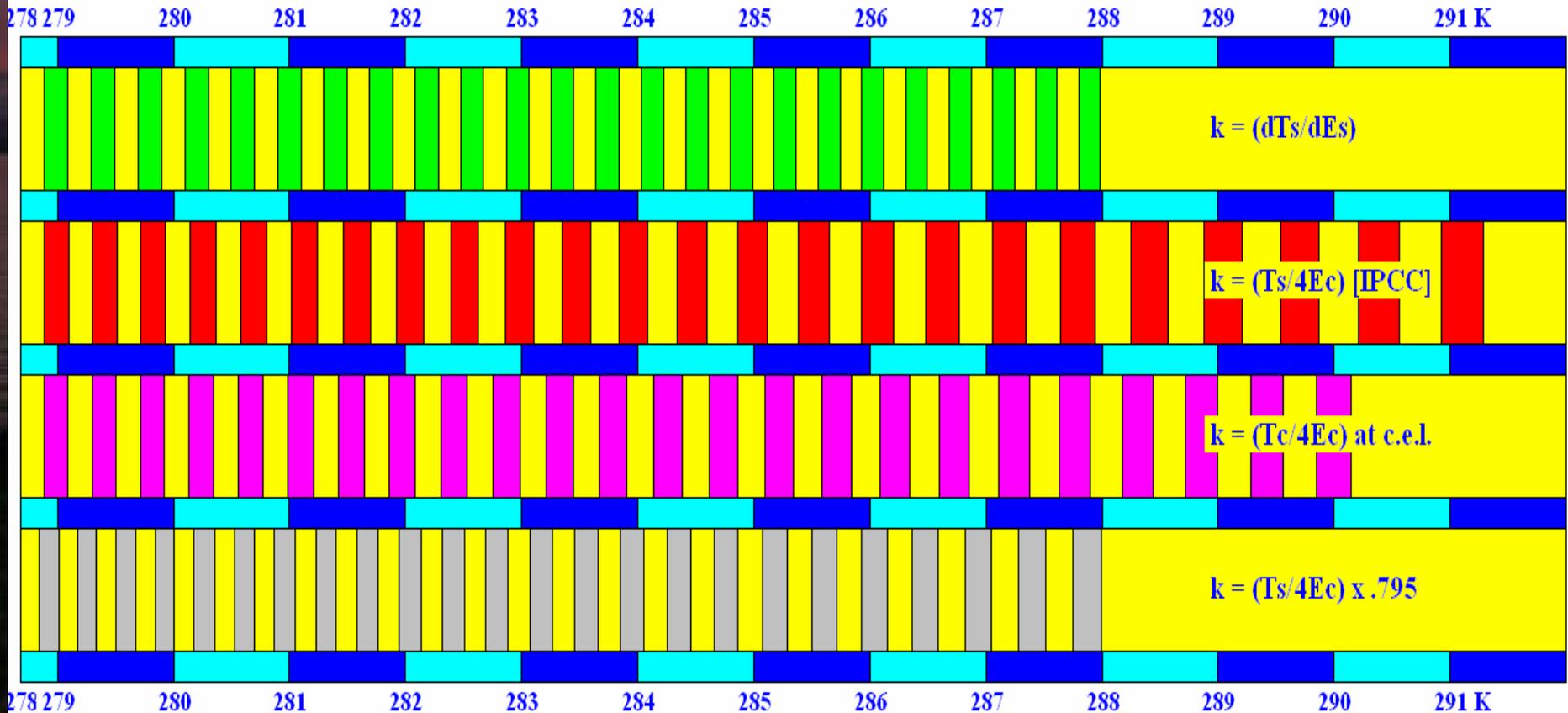
Uniform albedo: $E = 236$ to 390 W m^{-2}

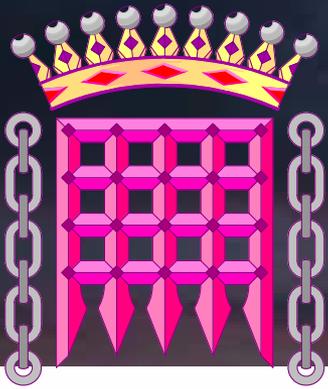




Exaggeration of κ : the “true-blackbody” case

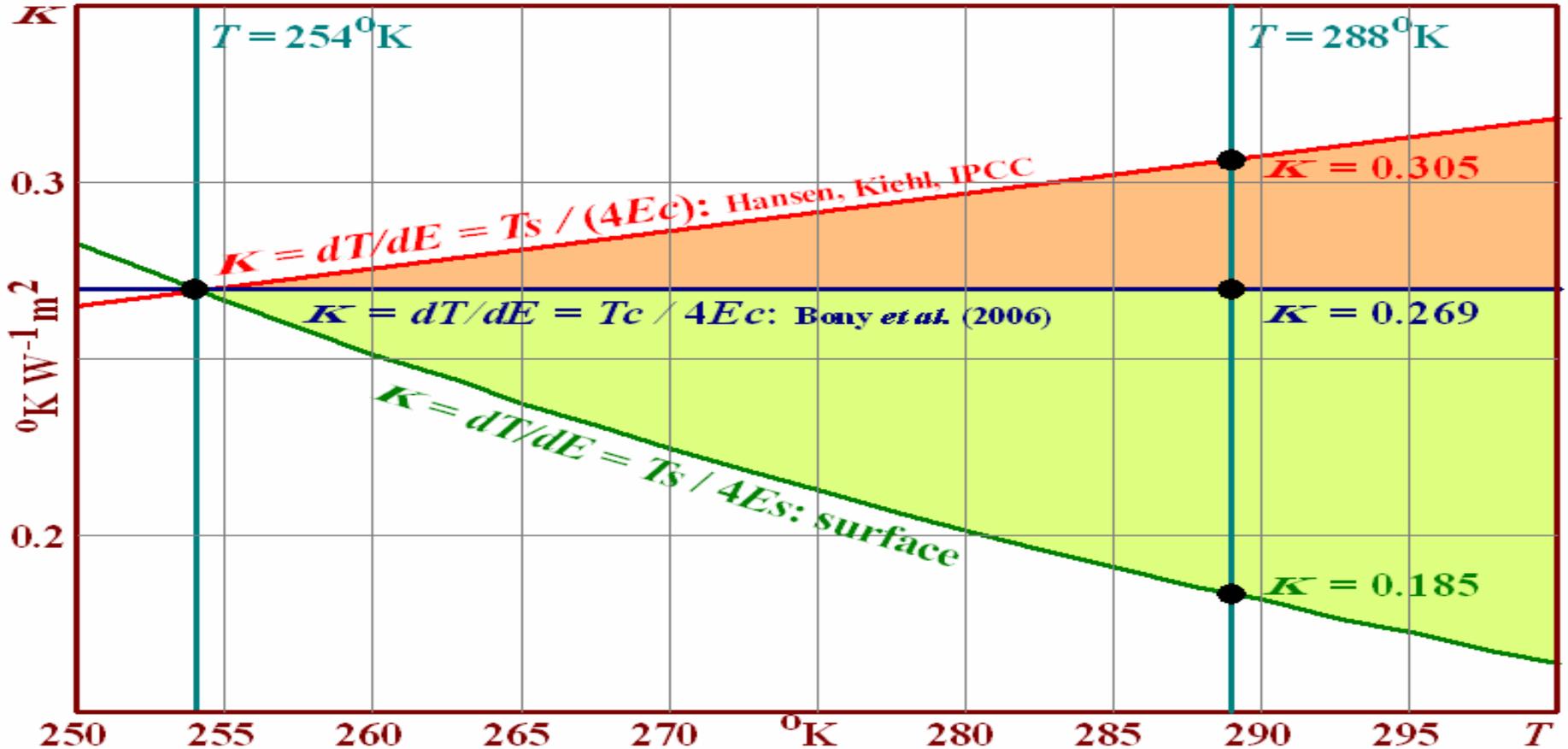
Zero-base albedo: $E = 342$ to 390 W m^{-2}



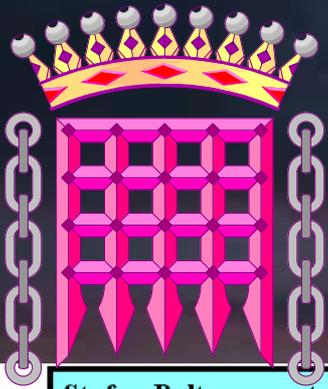


Exaggeration of κ : the central problem

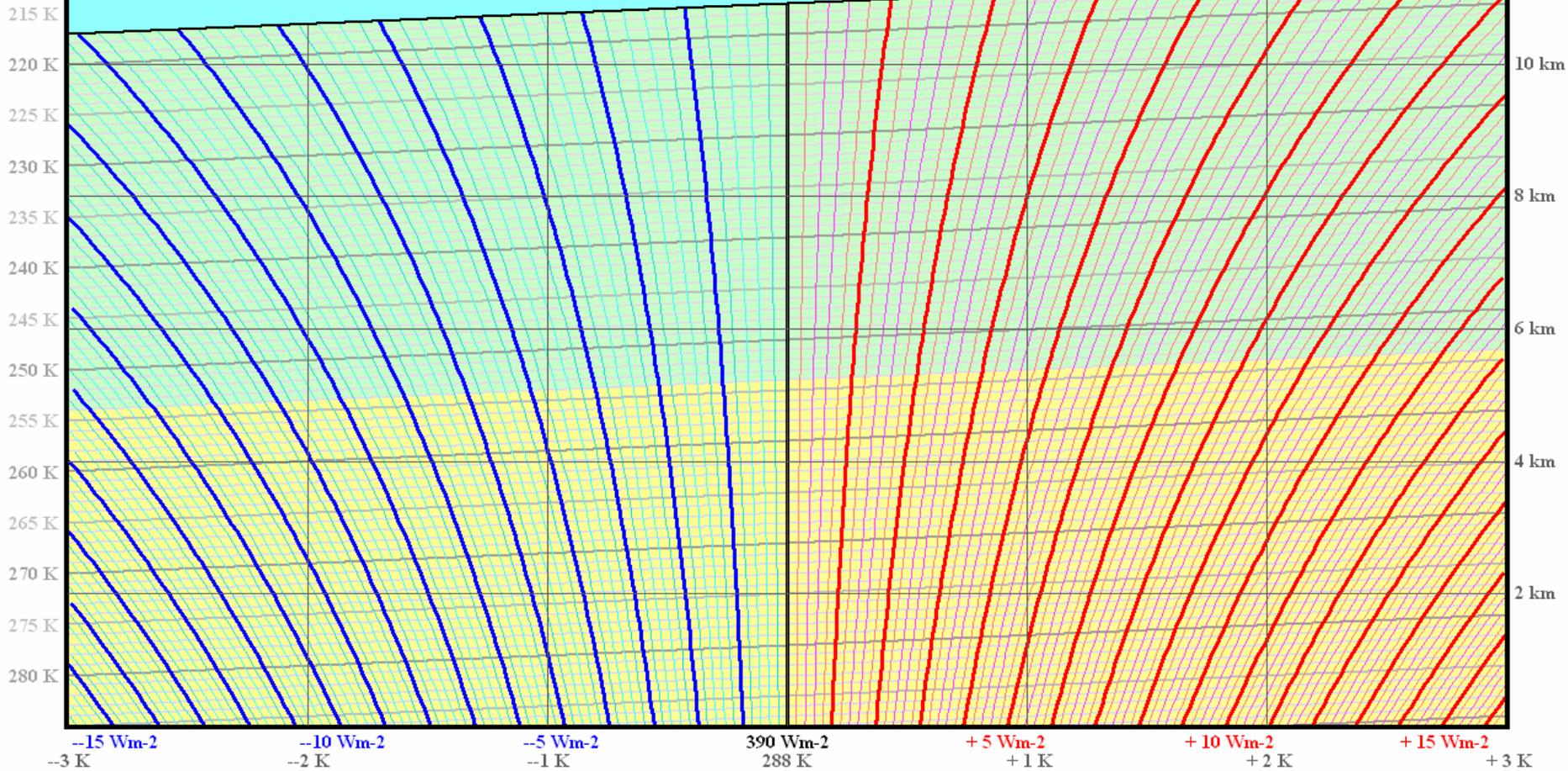
Some values of $\kappa = dT / dE$

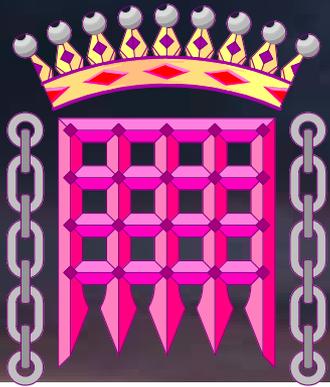


Searching for κ : dF equal at all altitudes



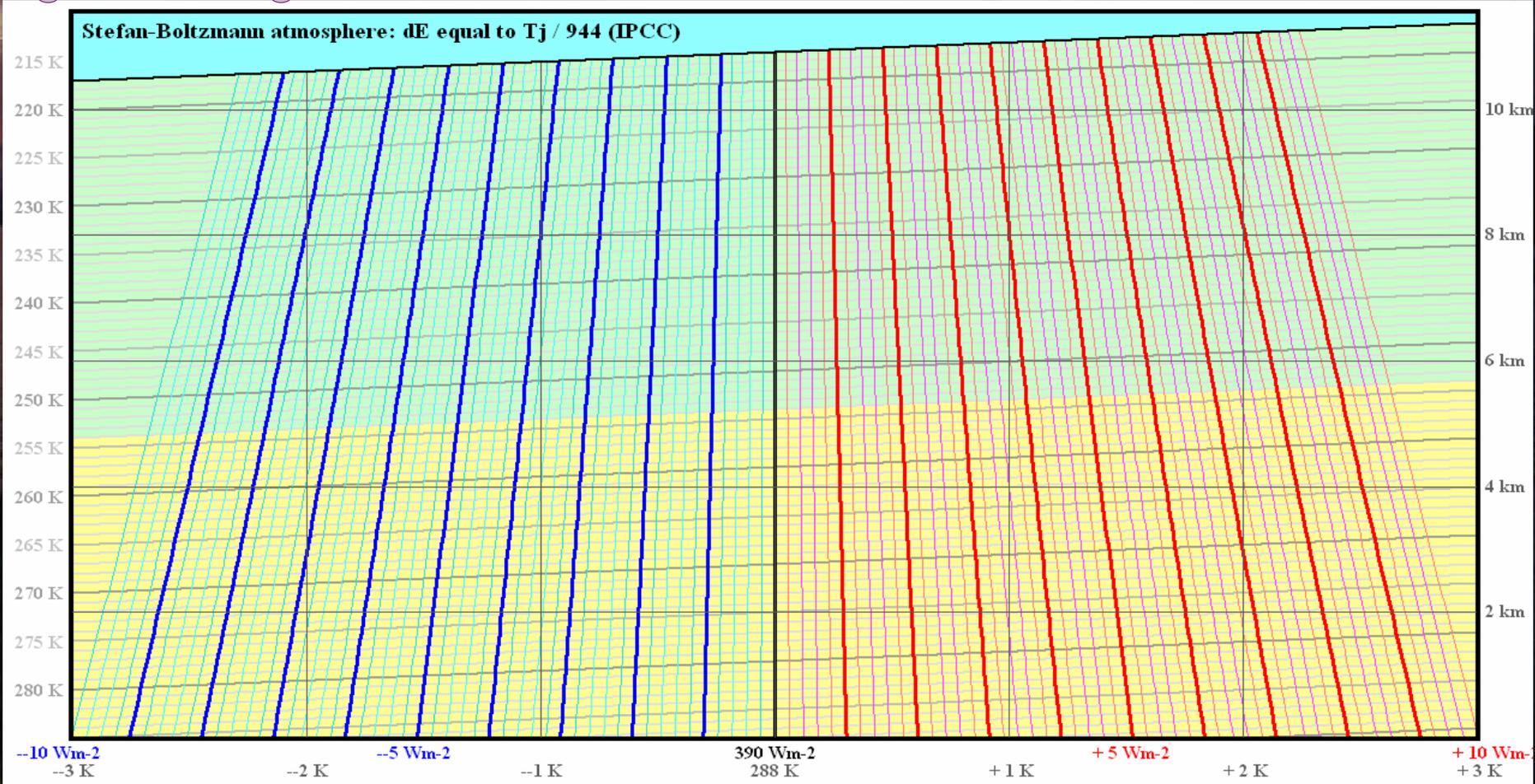
Stefan-Boltzmann atmosphere: dE uniform at 0.2 Wm^{-2}

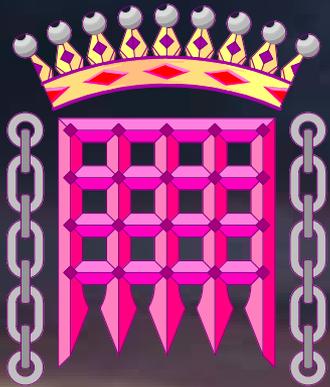




Searching for κ :

dF_j proportional to F_j





Searching for κ :

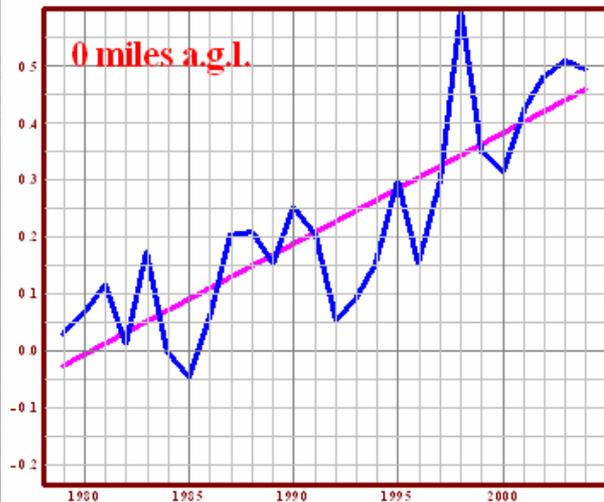
The 1979-2004 record

Steepening lapse-rate

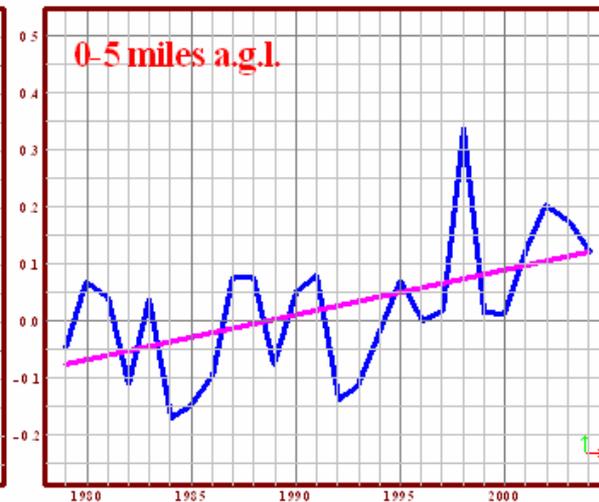
No c.e.l. temperature rise

Surface exothermic influence?

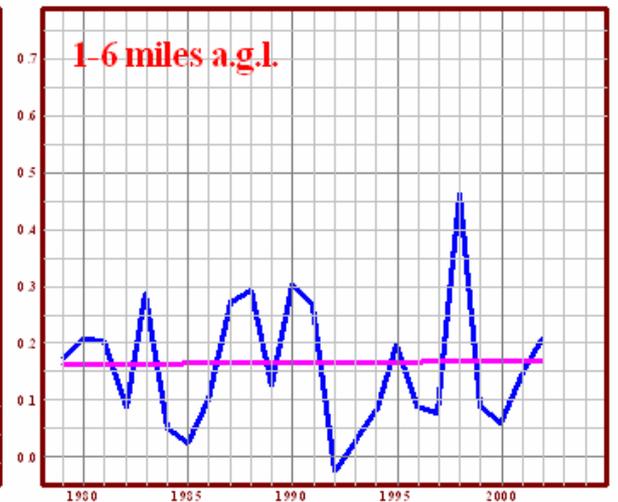
HadCRUt3 surface data for 1979-2004

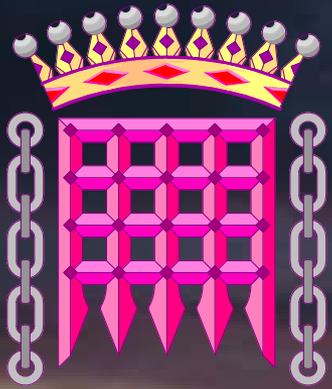


Satellite MSU data for 1979-2004



Radiosonde data for 1979-2004





The value of κ

IPCC

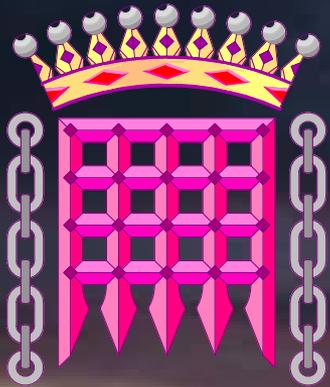
Revised

$$T_s / [S(1 - \alpha)]$$

$$\kappa_C \underline{\times 0.9}$$

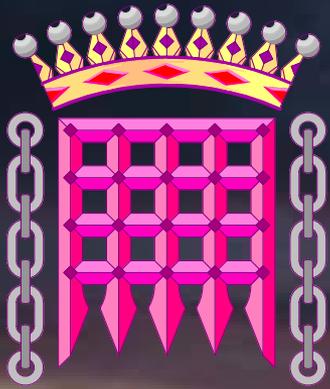
0.305 K W⁻¹ m²

0.242 K W⁻¹ m²



The feedback-sum b : up 51% since 1995

	$\text{W m}^{-2} \text{ } ^\circ\text{K}^{-1}$	<u>BUT</u>
Water vapor feedback	1.80	Wentz
Lapse rate feedback	(0.84)	
Surface albedo feedback	0.26	
Cloud albedo feedback	0.69	Spencer
<u>CO₂ feedback</u>	<u>0.25</u>	<u>Ahlbeck</u>
<u>IPCC (2007):</u>	<u>2.16</u>	<u>+ 51%</u>
IPCC (2001):	1.96	+ 37%
IPCC (1995):	1.43	



The value of b

IPCC

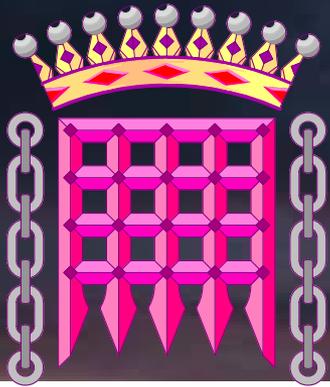
Revised

IPCC (2007)

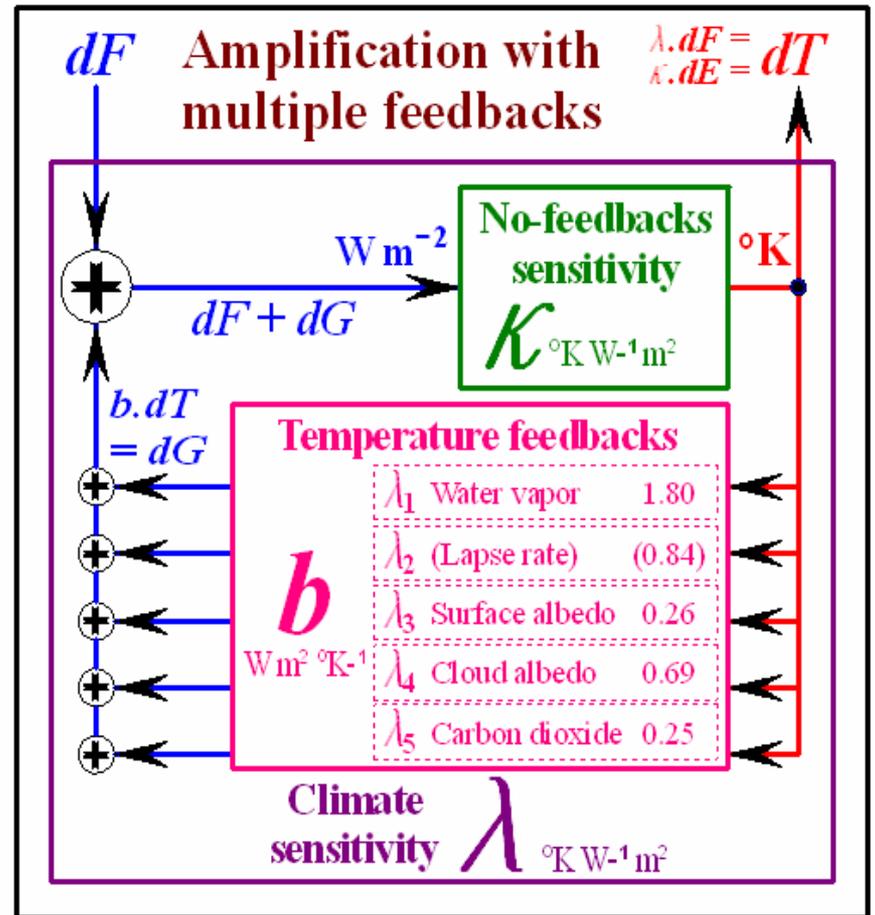
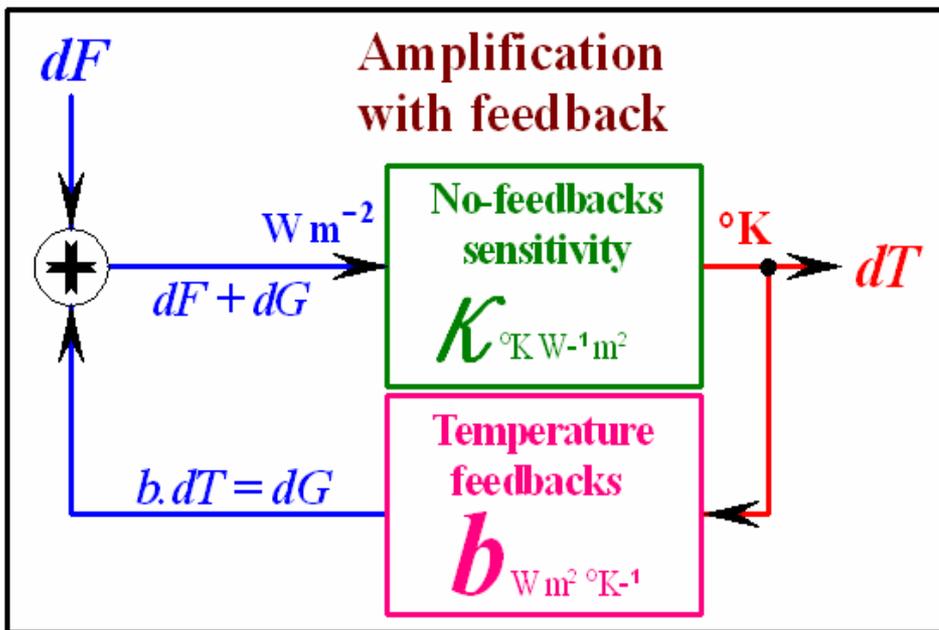
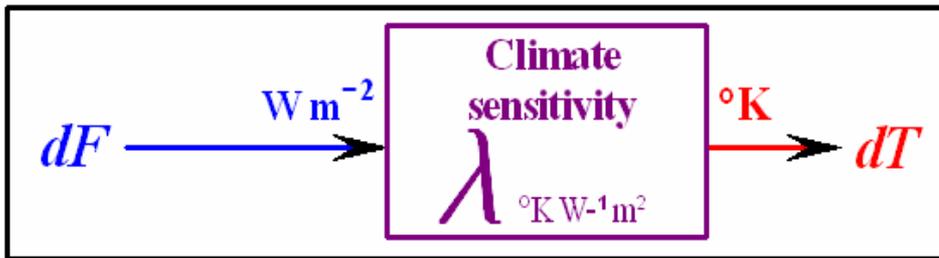
IPCC (1995)

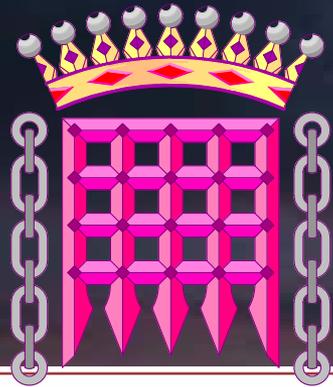
2.160 $\text{W m}^{-2} \text{K}^{-1}$

1.430 $\text{W m}^{-2} \text{K}^{-1}$



The feedback factor f is dependent on κ :



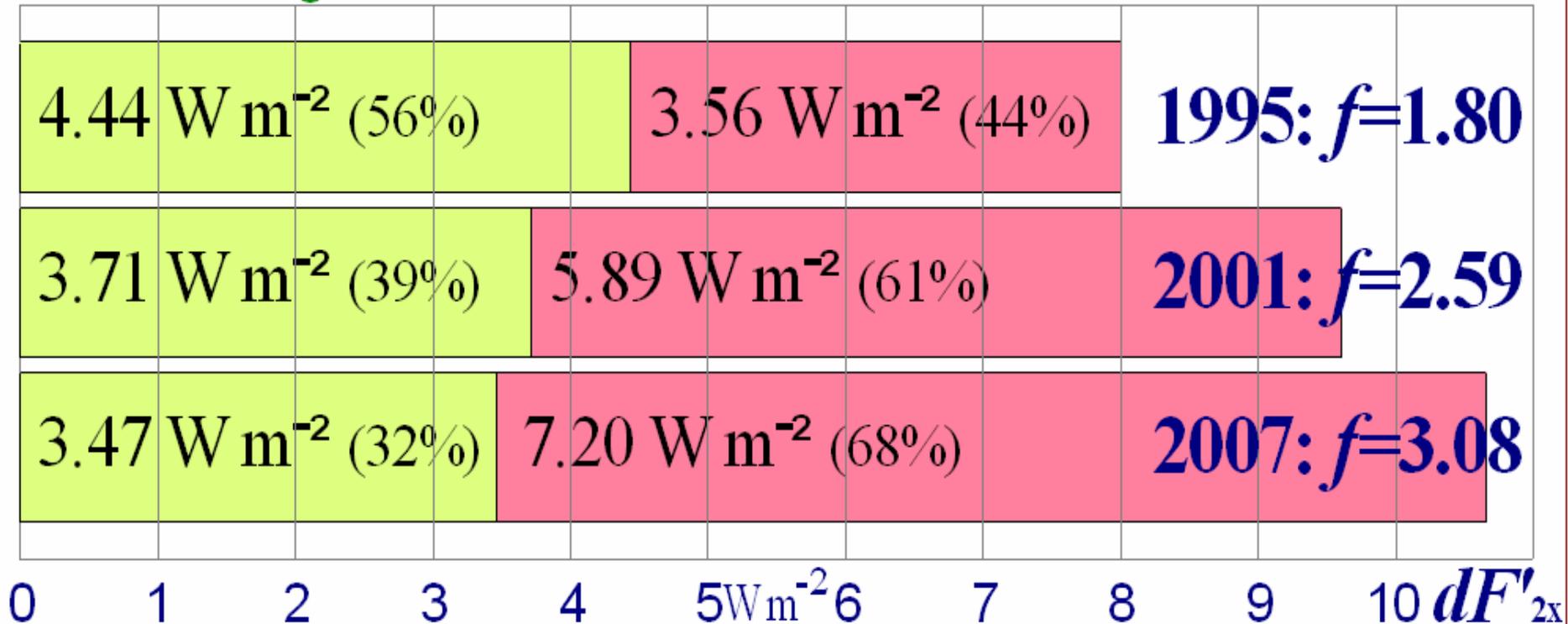


IPCC has inflated f by 71% since 1995

IPCC feedback inflation

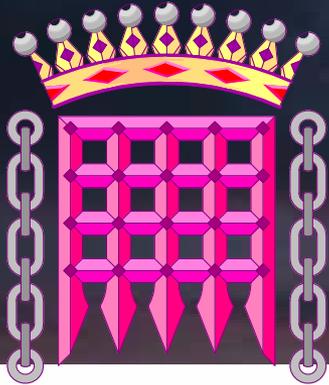
Forcings dF_{2x}

Feedbacks dG_{2x}

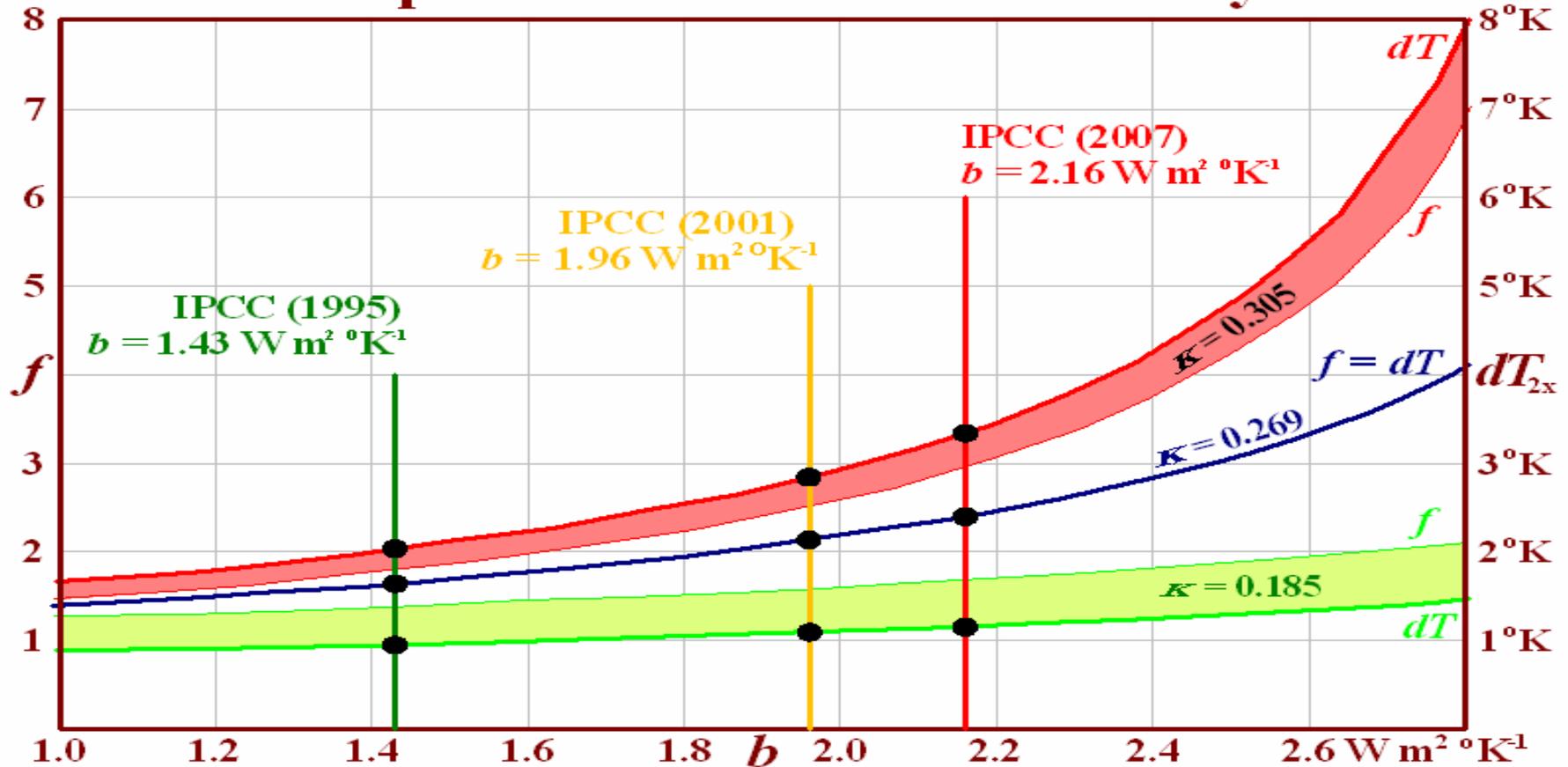


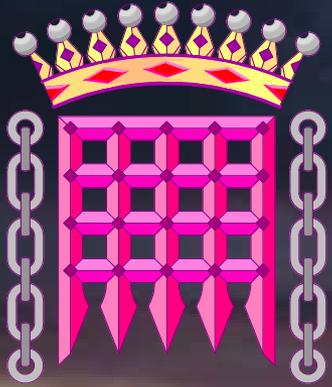
$$f = 1 / (1 - b\kappa):$$

towards instability



Temperature feedbacks and instability





The value of f

IPCC

Revised

$$1 / (1 - b\kappa)$$

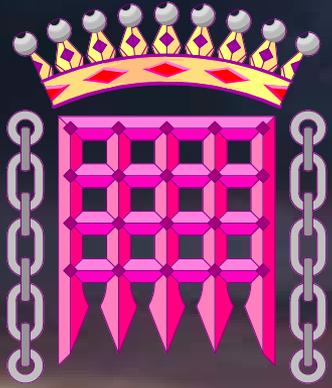
$$1 / (1 - b\kappa)$$

$$1 / (1 - 2.16 \times 0.313)$$

$$1 / (1 - \underline{1.43} \times \underline{0.242})$$

3.078

1.529



The value of dT

IPCC

Revised

dF

3.466

2.310 W m^{-2}

$\times \kappa$

$\times 0.313$

$\times 0.242 \text{ } ^\circ\text{K W}^{-1} \text{ m}^2$

$\times f$

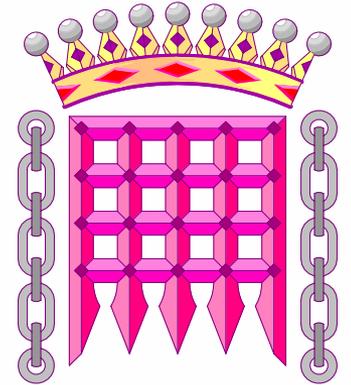
$\times 3.078$

$\times 1.529$

$= dT$

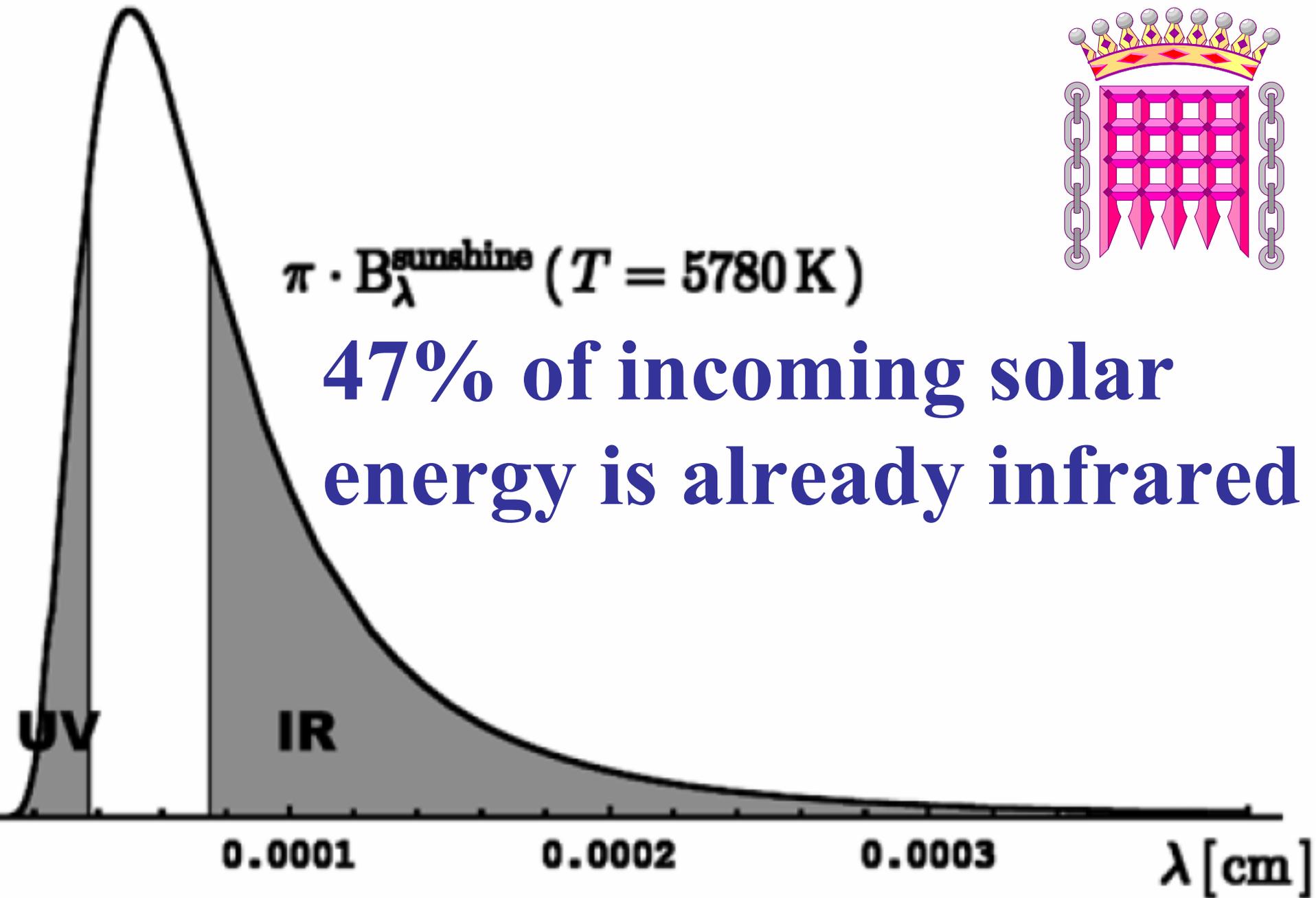
3.3 $^\circ\text{K}$

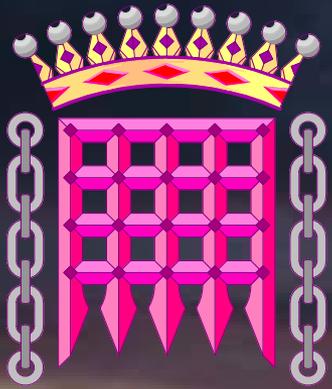
0.9 $^\circ\text{K}$



$$\pi \cdot B_{\lambda}^{\text{sunshine}} (T = 5780 \text{ K})$$

47% of incoming solar energy is already infrared





Why $dT = 0.9$ °K
may be an overestimate

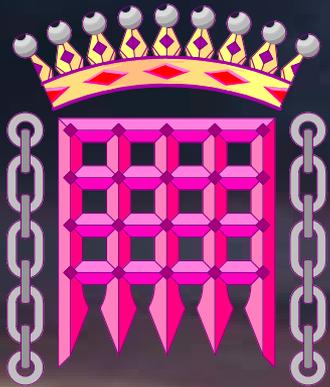
Professor Lindzen may be right

dF : 1.000 Incoming infrared 47%

κ : 0.200 Ocean heat uptk.: Chylek

f : 1.000 Lindzen, Spencer, Wentz

dT : 0.2 °K ???



Source

dT_{2x}

Calculated here

0.9 °C

Lindzen (2007: *implicit*)

<1.0 °C

Schwartz (2007)

1.1 °C

Arrhenius (1906)

1.6 °C

IPCC (1995: *implicit*)

1.8 °C

IPCC (2001); Ranamathan

1.8 °C

Houghton (2002: *implicit*)

2.0 °C

Forcings x2 (IPCC, 2001)

2.2 °C

Hansen, (2006₁)

2.4 °C

Hansen, (2006₂)

2.7 °C

Houghton (2006)

3.2 °C

IPCC (2007)

3.2 °C

Hansen (2006₃)

3.7 °C

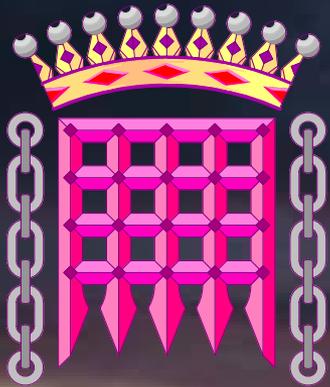
Stern (2006: *implicit*)

6.9 °C

Consensus?

What

consensus?



The dog that didn't bark in the night-time ...

Stefan-Boltzmann dF -to- dT equation

Empirical basis for g.h.g. forcings

47% of *incoming insolation* is already infrared

Not

in

IPCC

(2007)

K , the no-feedbacks parameter

Empirical values of K

Non-uniform latitudinal distribution of T_s

Near-absence of outgoing radiation at Poles

Feedback-sum b up 51% since 1995

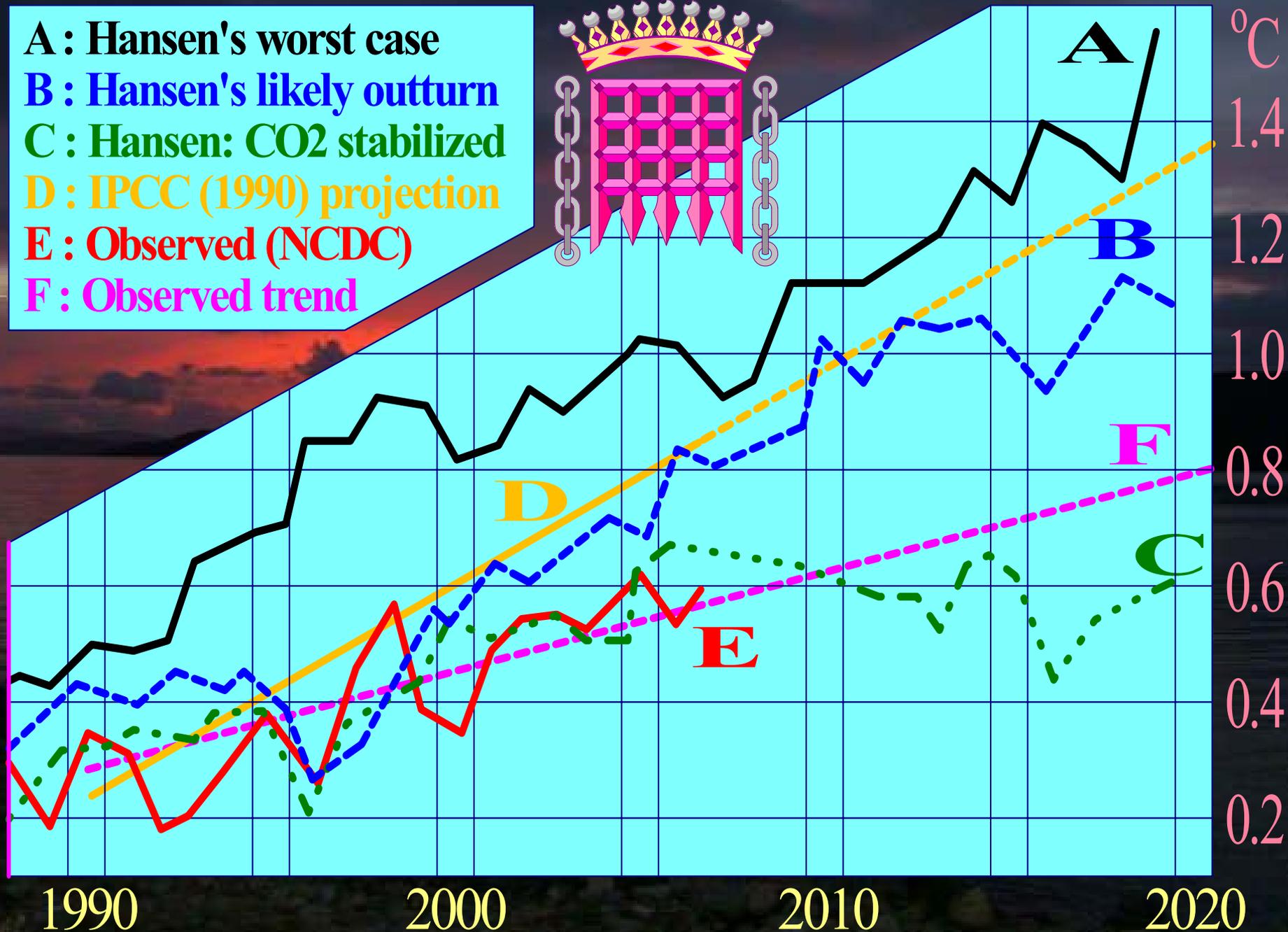
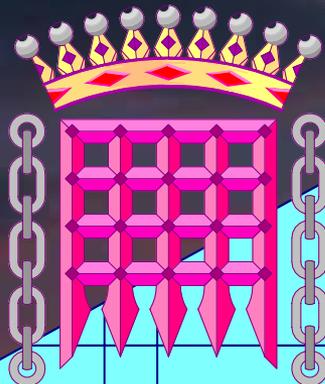
Feedback factor f up 71% since 1995

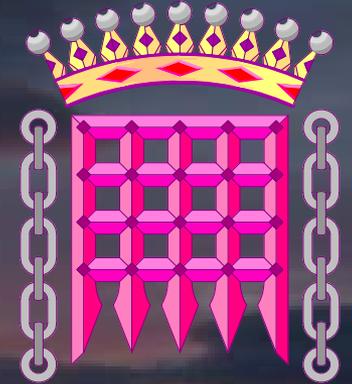
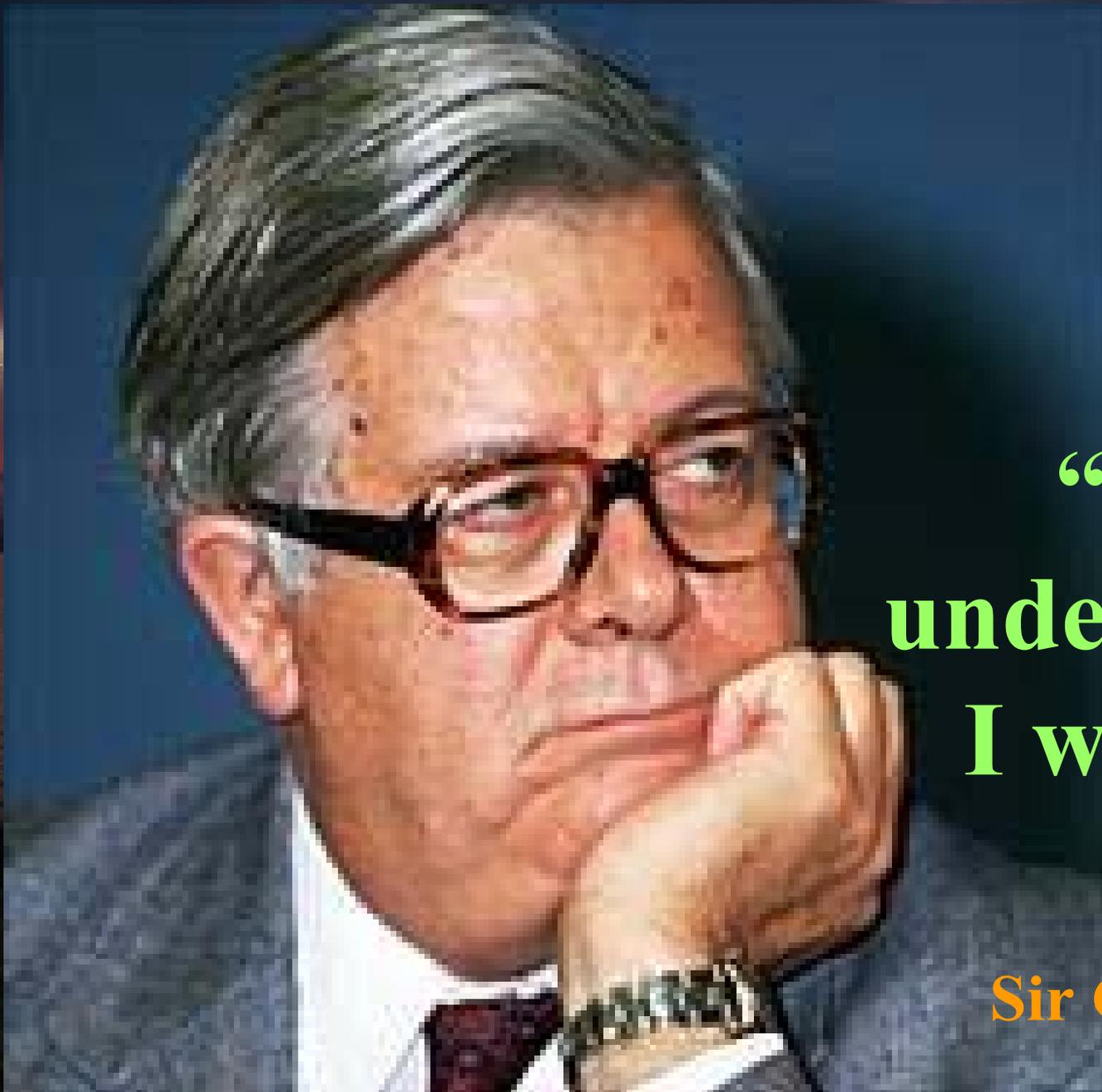
Feedback factor f is dependent on K

Increase in the lapse-rate as T rises

Effect of the absent "hot-spot" on temperature

- A** : Hansen's worst case
- B** : Hansen's likely outturn
- C** : Hansen: CO2 stabilized
- D** : IPCC (1990) projection
- E** : Observed (NCDC)
- F** : Observed trend





**“If I don’t
understand it,
I won’t do it
till I do.”**

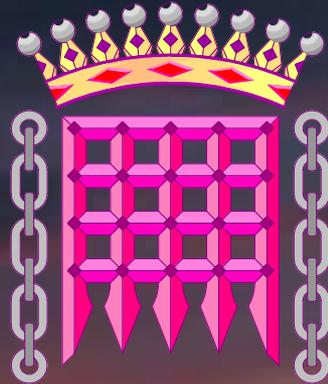
Sir Geoffrey Howe



**What effect
on Earth?**



Gore



Judge



Sea level up 20 ft

Pacific atolls evacuated

Ocean conveyor to stop

CO₂ drove temperature

Kilimanjaro melting

Lake Chad drying up

Katrina anthropogenic

Polar bears drowning

Coral reefs bleaching

Only after millennia

No evidence for it

To slow, not stop

Other way round

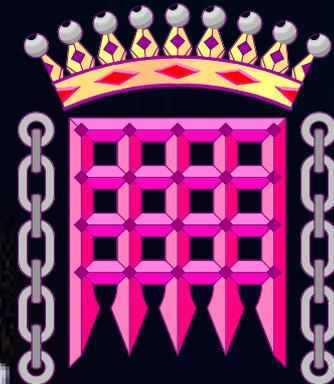
By natural causes

Not global warming

No proven link

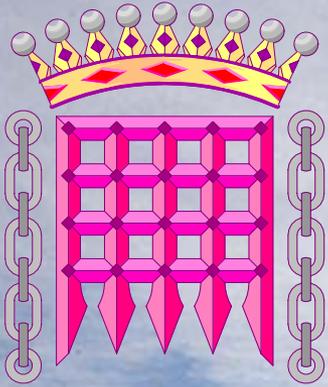
Storm killed 4 bears

Many causes



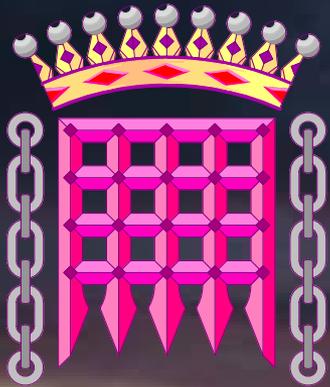
ERROR
1

“West Antarctica ... If this were to go, sea levels worldwide would go up 20 feet.”



Over the top

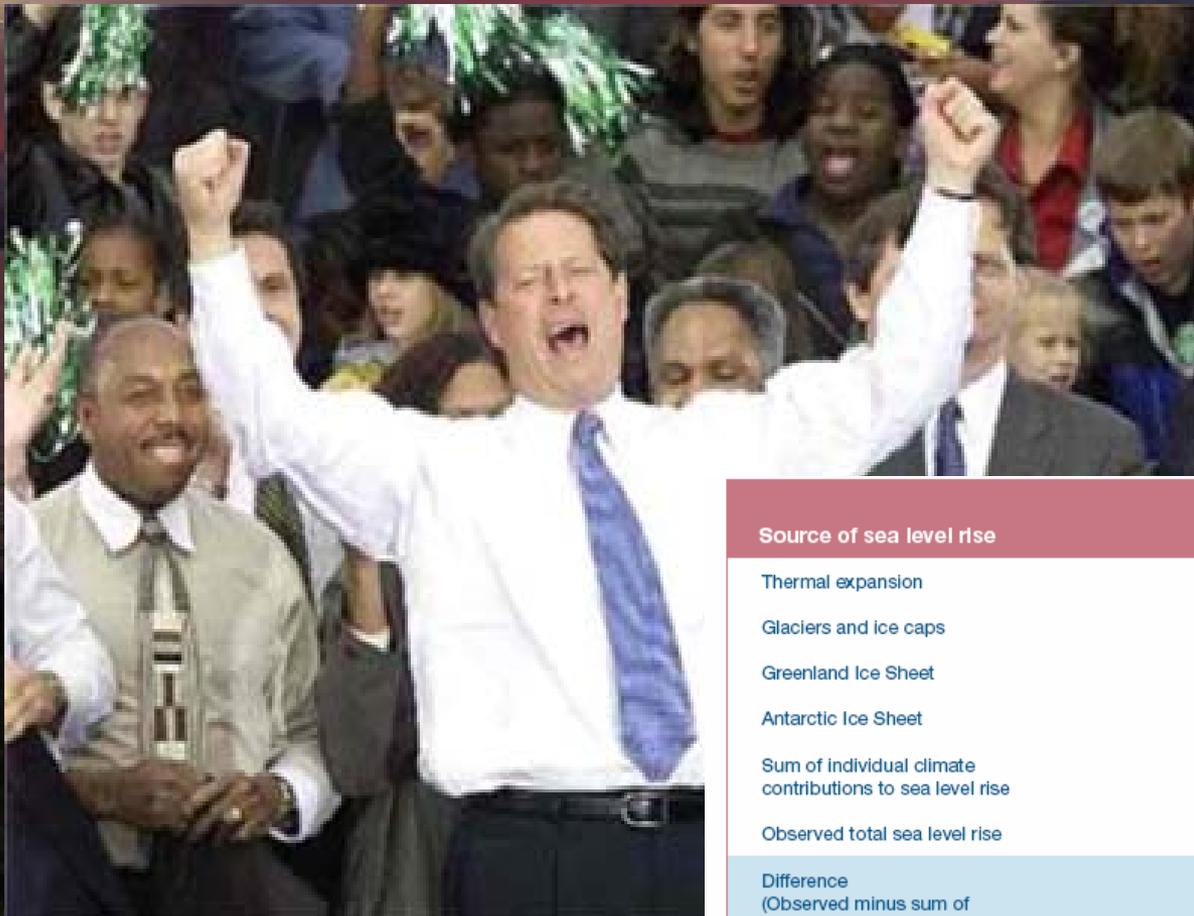
Year	Source	Max. rise in sea level	
1995	IPCC SAR	+ 92 cm	(+ 3ft 0in)
2001	IPCC TAR	+ 88 cm	(+ 2ft 11in)
2007	IPCC AR4	+ 59 cm	(+ 1ft 10in)
2007	Pop. <=9bn	+ 43 cm	(+ 1ft 5in)
2005	Gore film	+ 610 cm	(+ 20ft 0in)



Gore's 9000% exaggeration

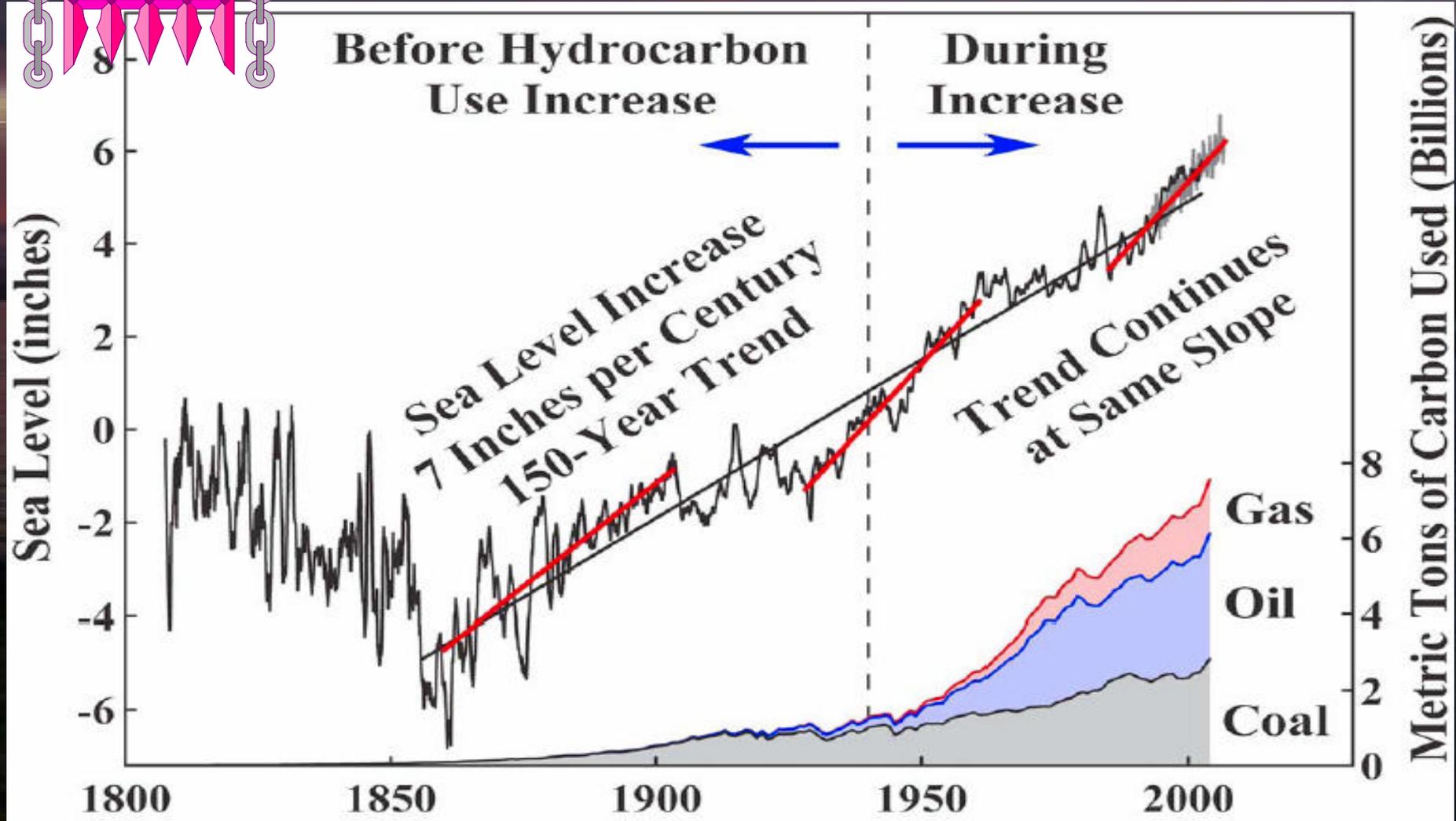
IPCC: 6.5cm
sea-level rise
from the great
ice-sheets
in 100 years.

Gore: 610 cm



Source of sea level rise	Rate of sea level rise (mm per year)	
	1961–2003	1993–2003
Thermal expansion	0.42 ± 0.12	1.6 ± 0.5
Glaciers and ice caps	0.50 ± 0.18	0.77 ± 0.22
Greenland Ice Sheet	0.05 ± 0.12	0.21 ± 0.07
Antarctic Ice Sheet	0.14 ± 0.41	0.21 ± 0.35
Sum of individual climate contributions to sea level rise	1.1 ± 0.5	2.8 ± 0.7
Observed total sea level rise	1.8 ± 0.5 ^a	3.1 ± 0.7 ^a
Difference (Observed minus sum of estimated climate contributions)	0.7 ± 0.7	0.3 ± 1.0

Mean sea level has risen at a uniform rate since the 1860s

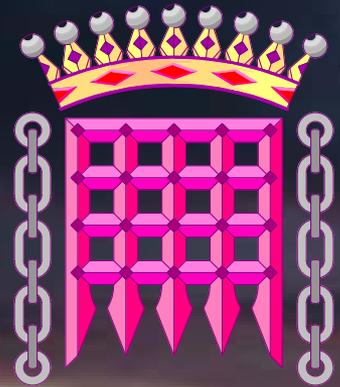


**Gore does not believe
his own prediction:**



**Al Gore's \$4m
St. Regis condo
by the sea, 2005**

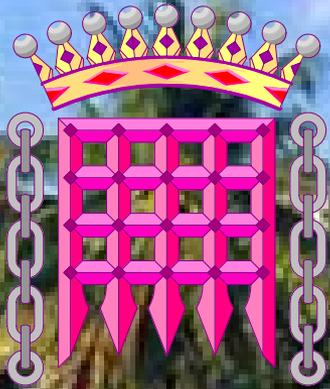




Sea level rise: the verdict



“This is distinctly alarmist and part of Mr. Gore’s ‘wake-up call’. It is common ground that if Greenland melted it would release this amount of water, but only after, and over, millennia, so that **the Armageddon scenario he depicts is not based on any scientific view.**”



ERROR

2

WIDESCREEN EDITION

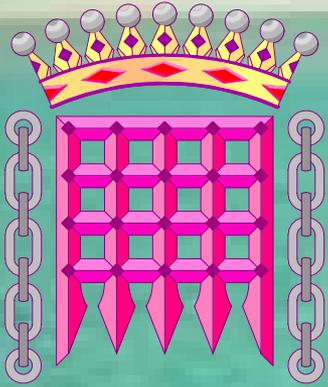
And just like that
my running days was over,
so I went home to Tennessee.
That's all I have to say 'bout that...
I have to pee.

Al Gore is
Forrest
Gore



6 Academy Awards® including Best Picture

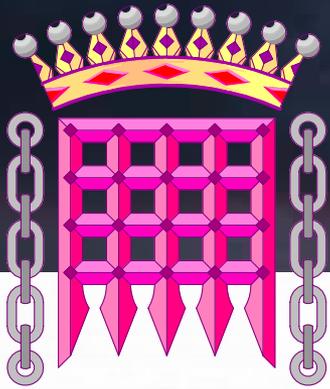
“The citizens of these Pacific nations all had to evacuate to New Zealand.”



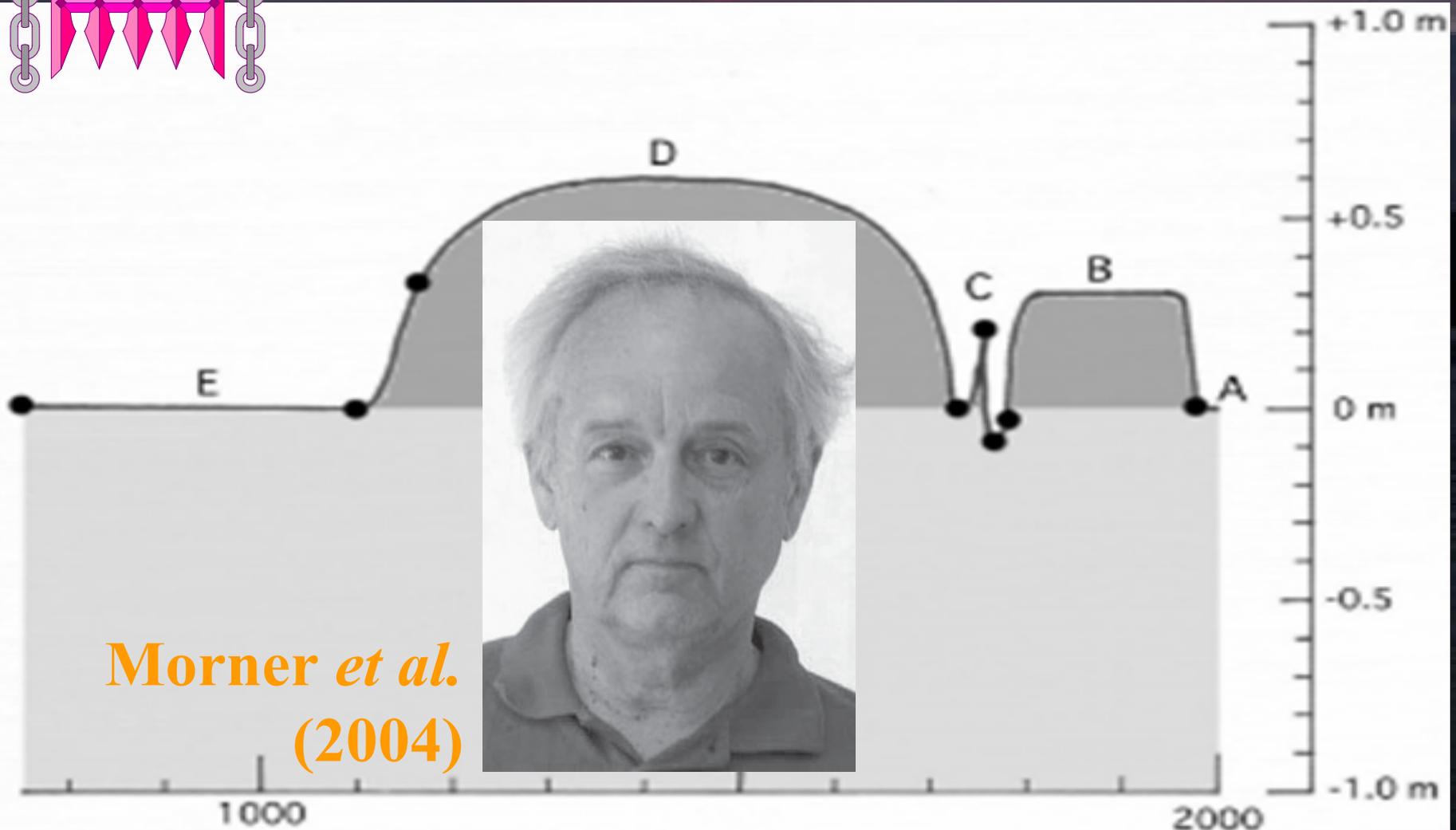
Sea level rise? What sea level rise?

Johnston Island:	no sea level rise for 50 years
Tuvalu:	no sea level rise for 48 years
Kanton Island:	no sea level rise for 28 years
Nauru:	no sea level rise for 26 years
Solomons:	no sea level rise for 26 years
Kiribati:	no sea level rise for 24 years
Saipan:	no sea level rise for 22 years

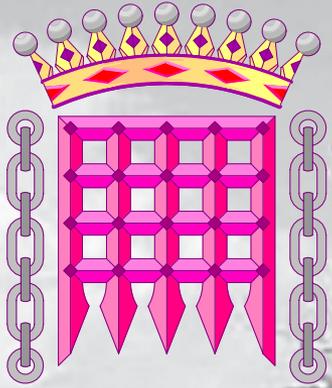
Khandekar (2005)



Maldives: no sea level rise for 1250 years



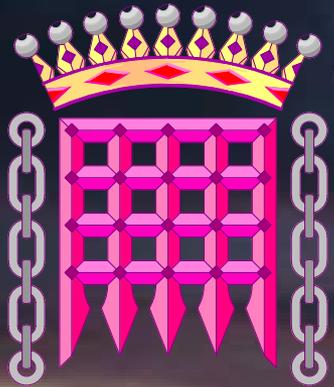
Morner et al.
(2004)



The Maldivian tree killed by environmentalists

Morner
(2007)

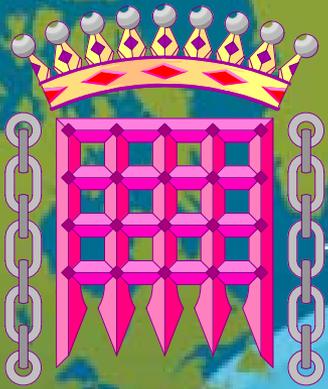




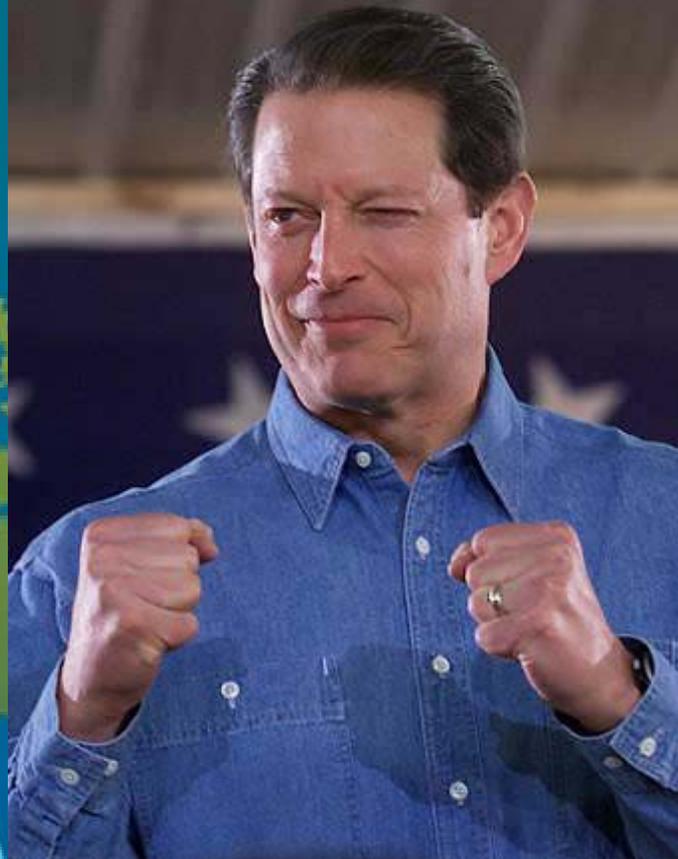
Pacific atolls: the verdict

“Mr. Gore states,
‘That’s why the citizens
of these Pacific nations
all had to evacuate to
New Zealand.’ There is
no evidence of any such
evacuation having yet
happened.”





Sea-to-Air
Heat Transfer



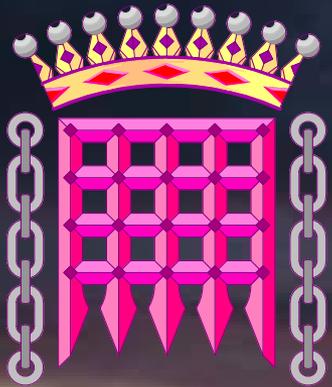
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Solar Warming
of Ocean Waters

Warm Shallow Current

Cold and Salty Deep Current

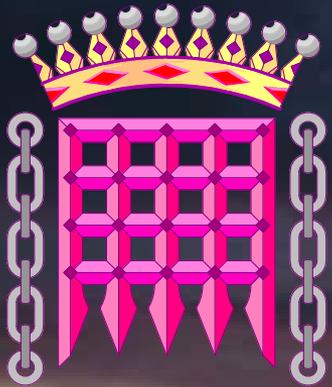
**“Of course that’s not
going to happen again.”**



No, it's not going to happen again ...

“Changes in the thermohaline circulation during the last century are likely the result of natural multidecadal climate variability. Indications of a sustained THC weakening are not seen during the last few decades. Instead, a strengthening since the 1980s is observed.”

Latif et al. (2006)

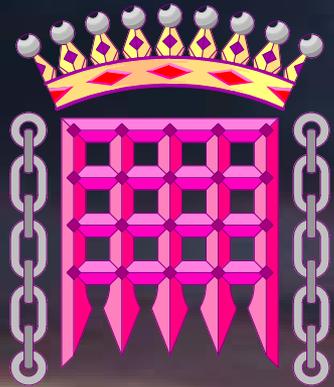


The wind drives the thermohaline circulation

“Shut-off would imply repeal of the law of conservation of angular momentum...

Widely disseminated and grossly oversimplified pictures showing the ocean as a ‘conveyor belt’ have misled people into thinking ocean circulation is driven by a sinking motion at high latitudes.”

Professor Carl Wunsch, MIT



The “ocean conveyor”: the verdict

“There is no scientific view, according to the IPCC, that the ‘ocean conveyor’ is likely to shut down in future, though it is considered likely that the thermohaline circulation may slow down.”



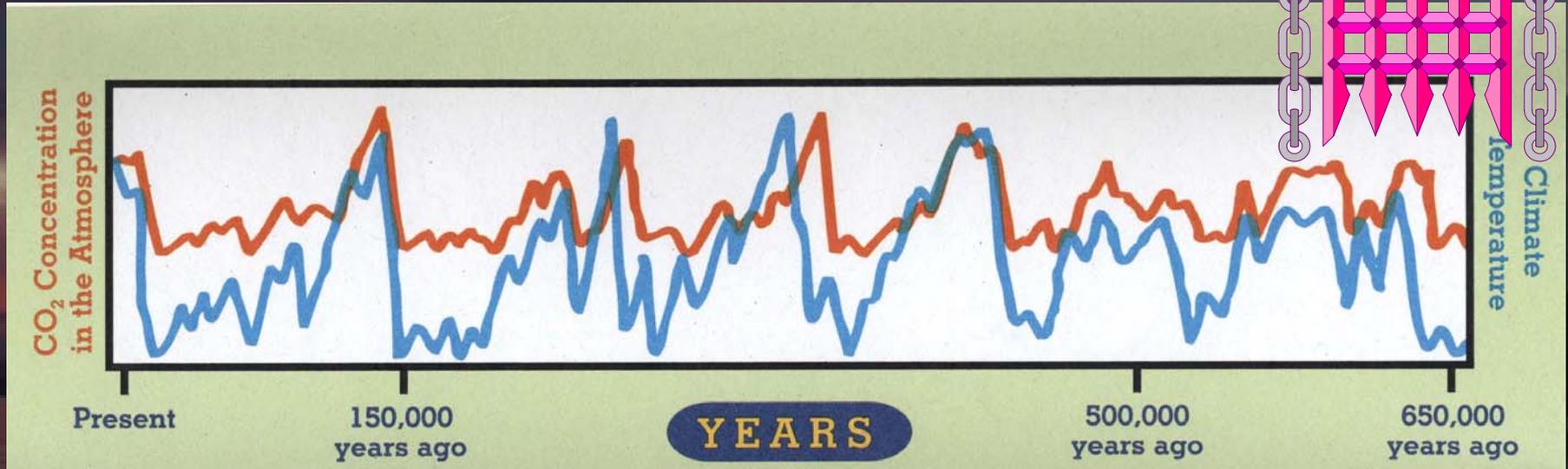
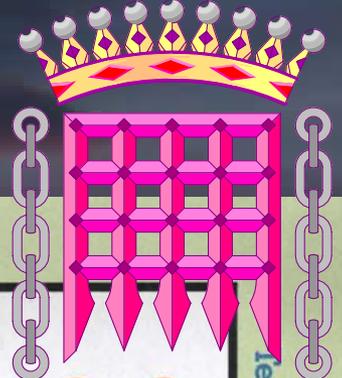


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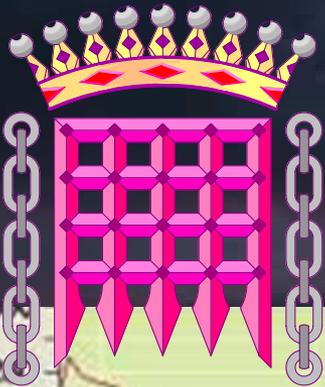
“But there is one relationship that is more powerful than all the others and it is this. When there is more carbon dioxide, the temperature gets warmer, because it traps more heat from the sun inside.”

How to mislead children:

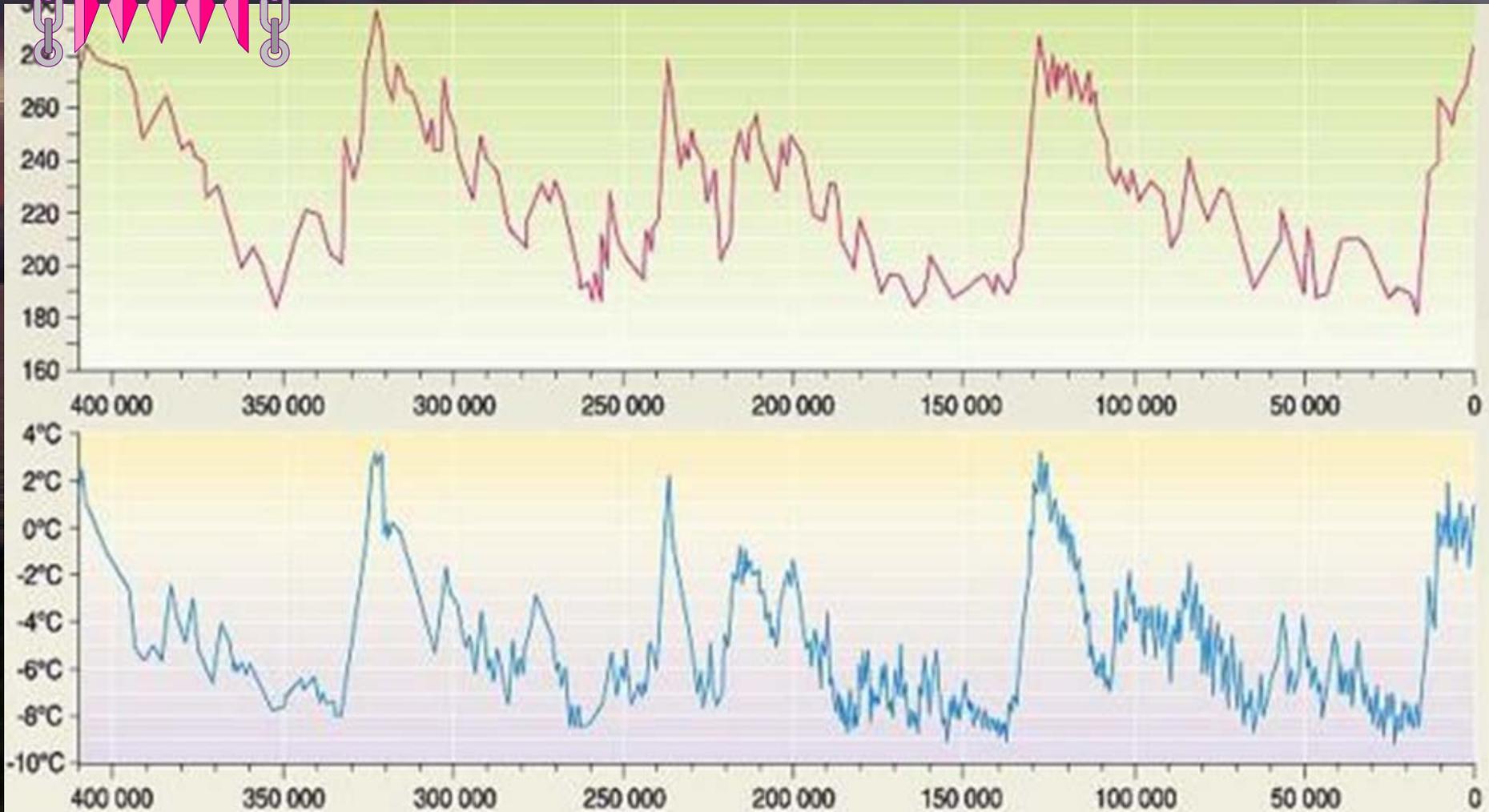


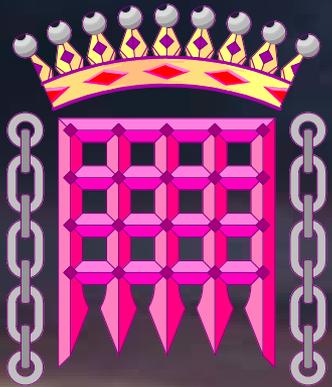
“The more the CO₂ in the atmosphere, the higher the temperature climbed. The less CO₂, the more the temperature fell. You can see this relationship for yourself by looking at the graph.”

Laurie David (2007)



Temperature changes seem to track CO₂ changes ...



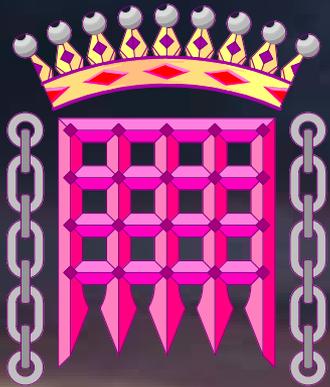


... but CO₂ changes came after temperature changes

“The CO₂ decrease lags the temperature decrease by several thousand years ...

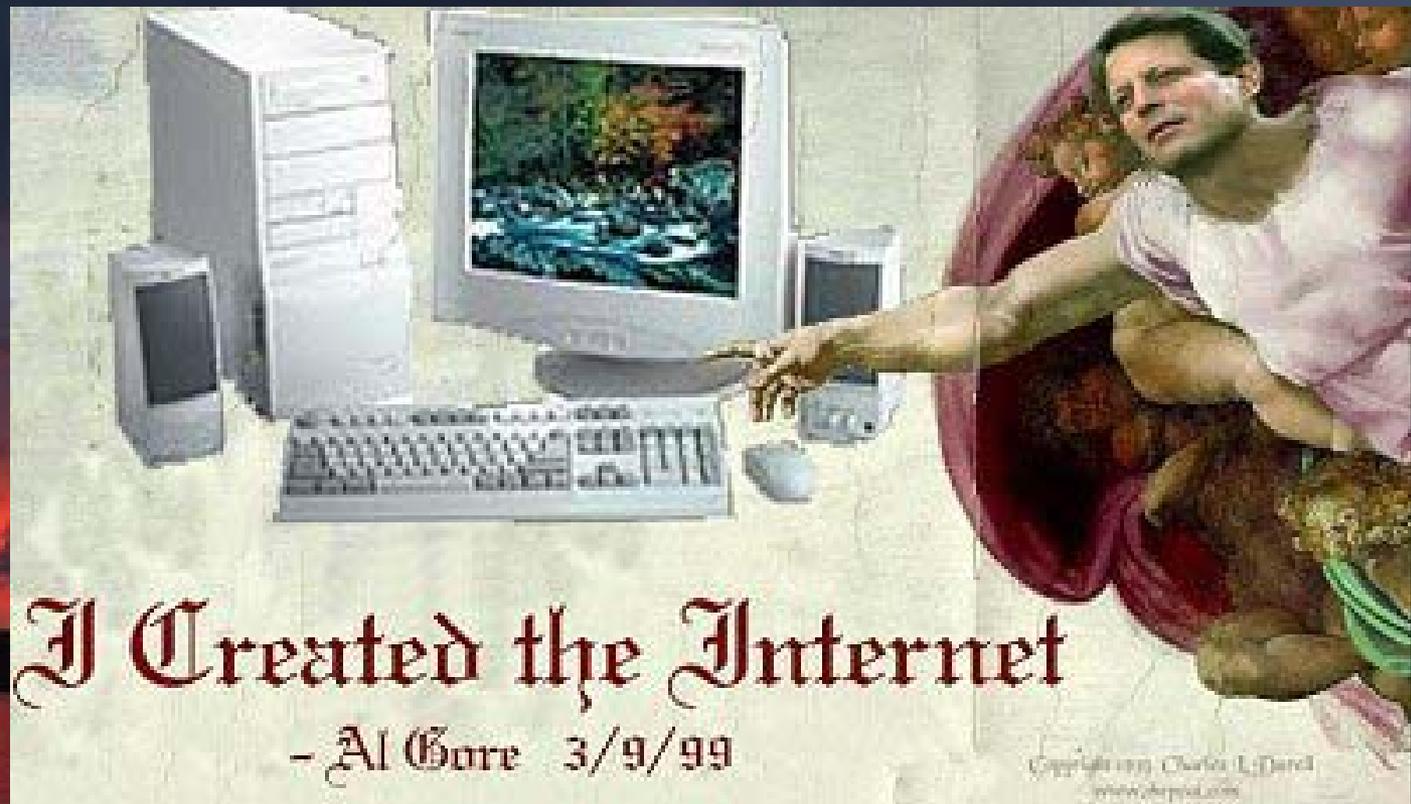
The same sequence of climate forcing operated during each termination.”

Petit et al. (1999)

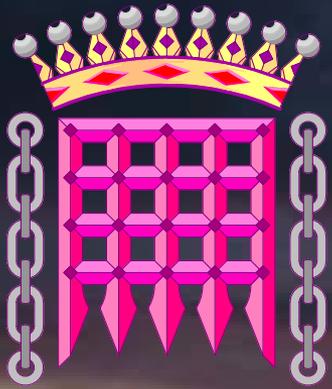


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5



“This is the difference between a nice day and having a mile of ice above your head. Keep that in mind when you look at this fact.”



Gore's tenfold "mile of ice" exaggeration

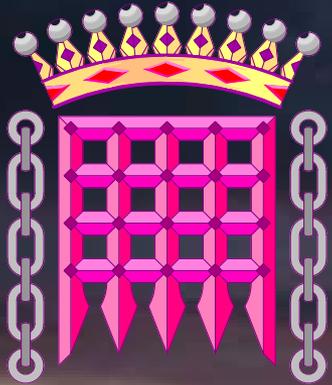
From Ice Age to interglacial

Temperature increase: 12.5 °C

of which -

CO₂: $0.5[5.35 \ln(280/180)]$: 1.2 °C

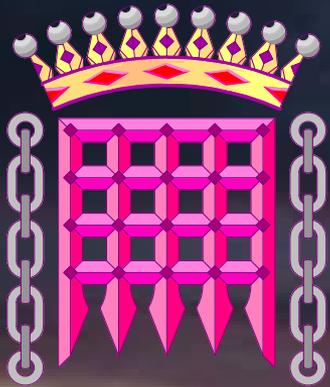
Other (e.g. Milankovich): 11.3 °C



Palaeoclimate: the verdict



“Mr. Gore shows two graphs relating to a period of 650,000 years, one showing rise in CO₂ and one ... temperature, and asserts (by ridiculing the opposite view) that they show an exact fit. Although there is ... scientific agreement that there is a connection, **the two graphs do not establish what Mr. Gore asserts.**”

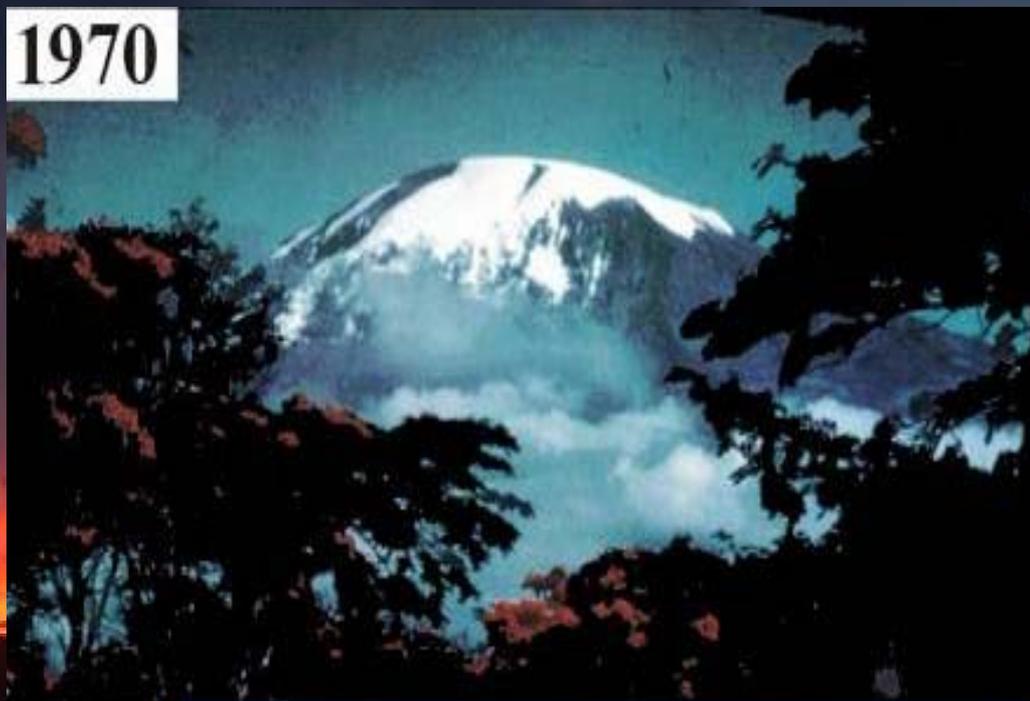


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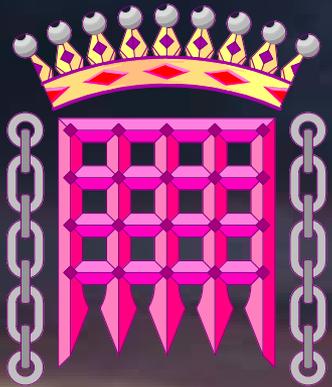
“And now we’re beginning to see the impact in the real world. This is Mount Kilimanjaro more than 30 years ago, and more recently.”

1970



2000

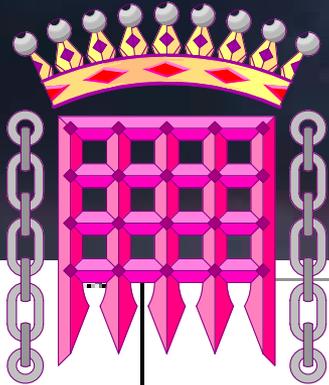




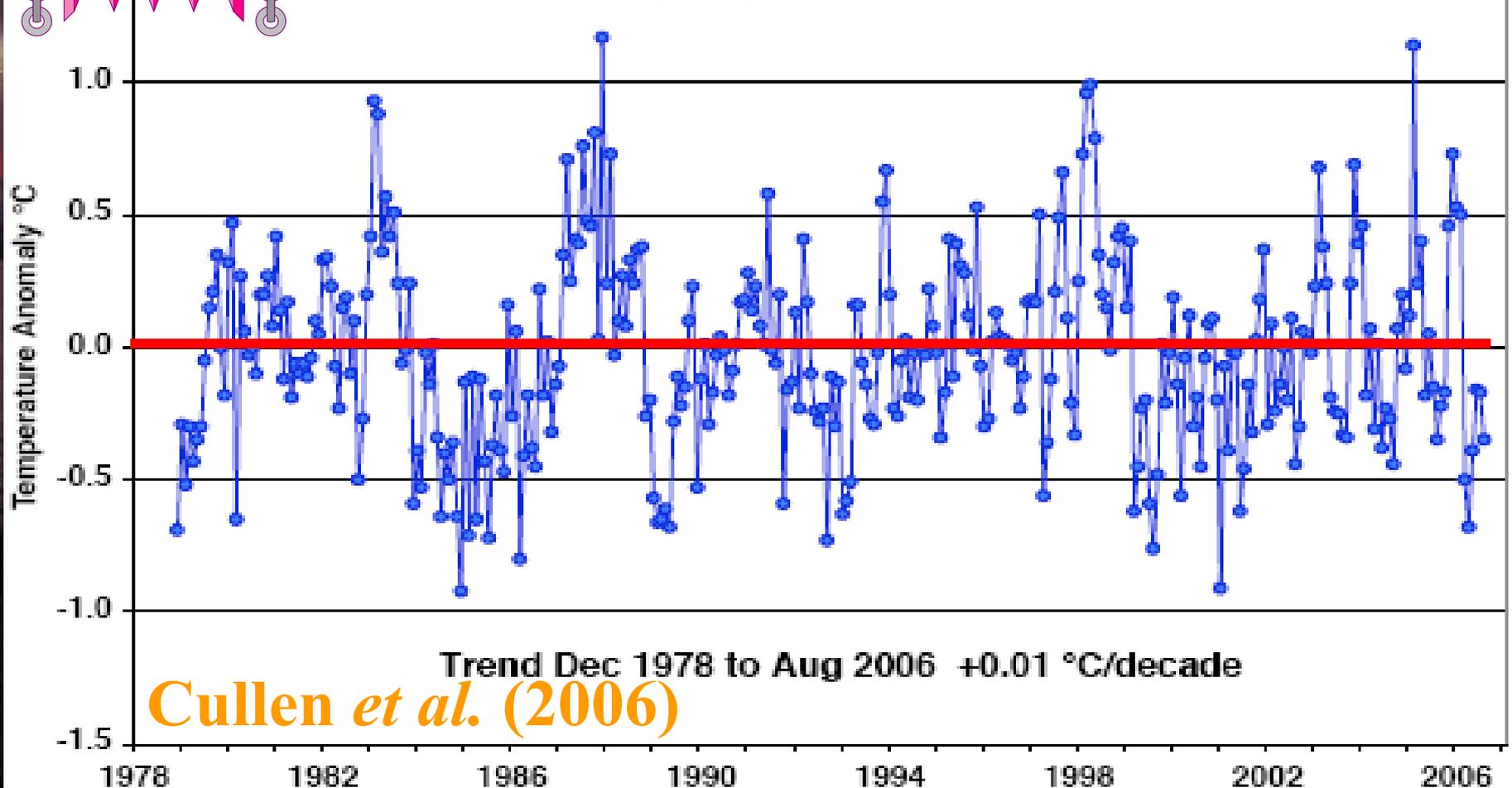
"Monthly mean air temperatures only vary slightly around the annual mean of -7.1°C , and air temperatures never rise above the freezing point ... Changes in air humidity and atmospheric moisture content seem to play an underestimated key role in tropical mountain climates."

**Molg *et al.*
(2003)**

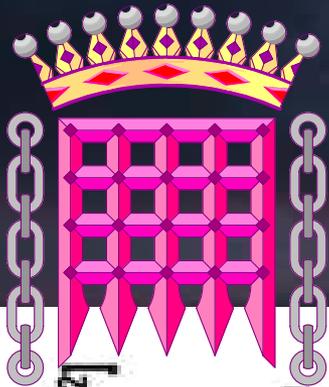
No trend in Kilimanjaro temperature, 1978-2006



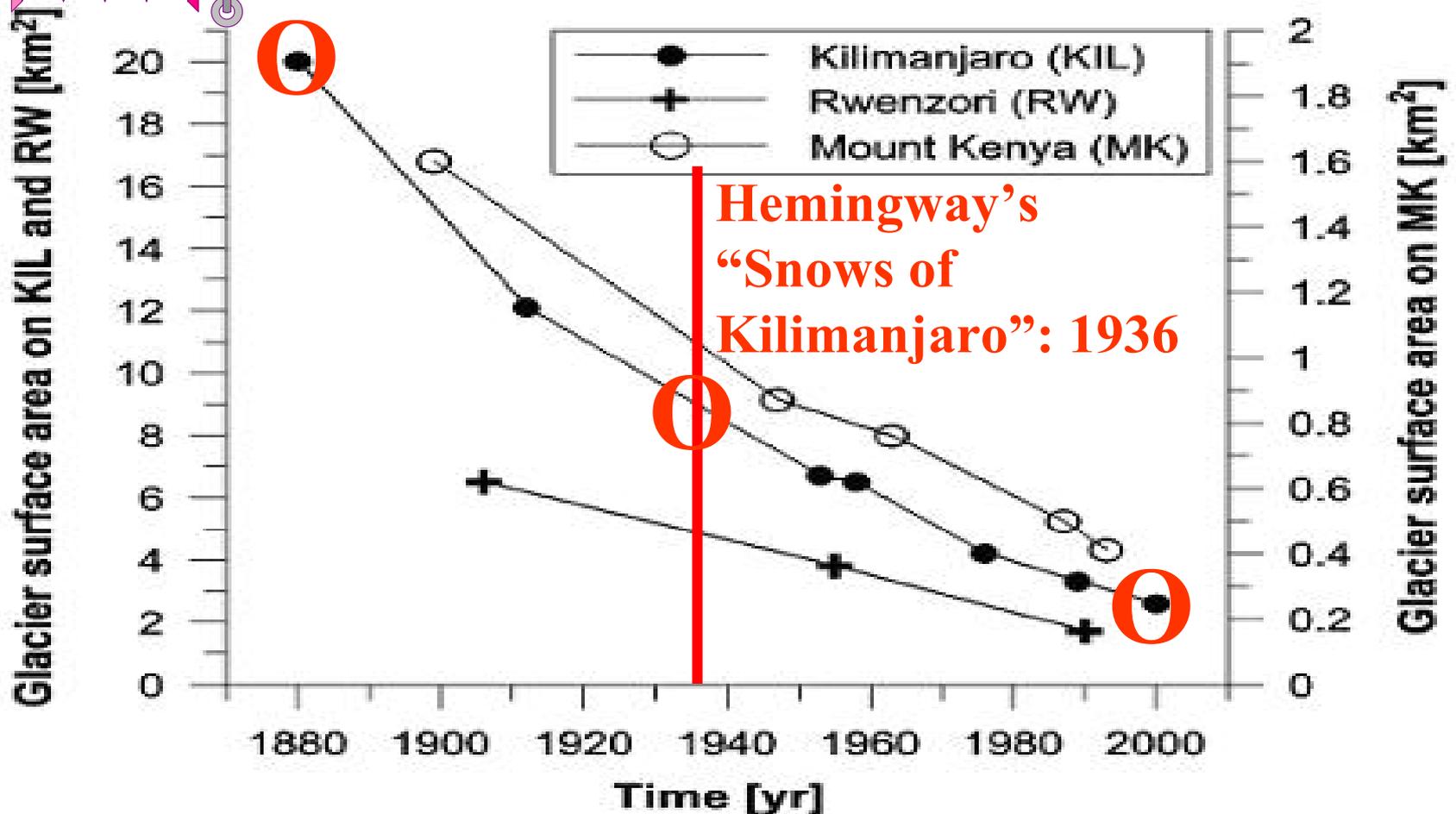
Lower Troposphere Kilimanjaro UAH v5.2

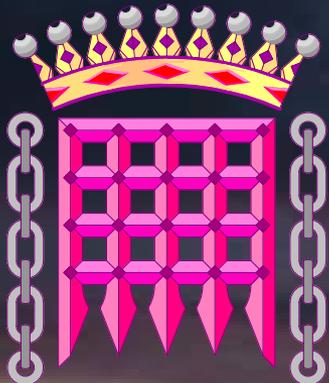


Cullen et al. (2006)



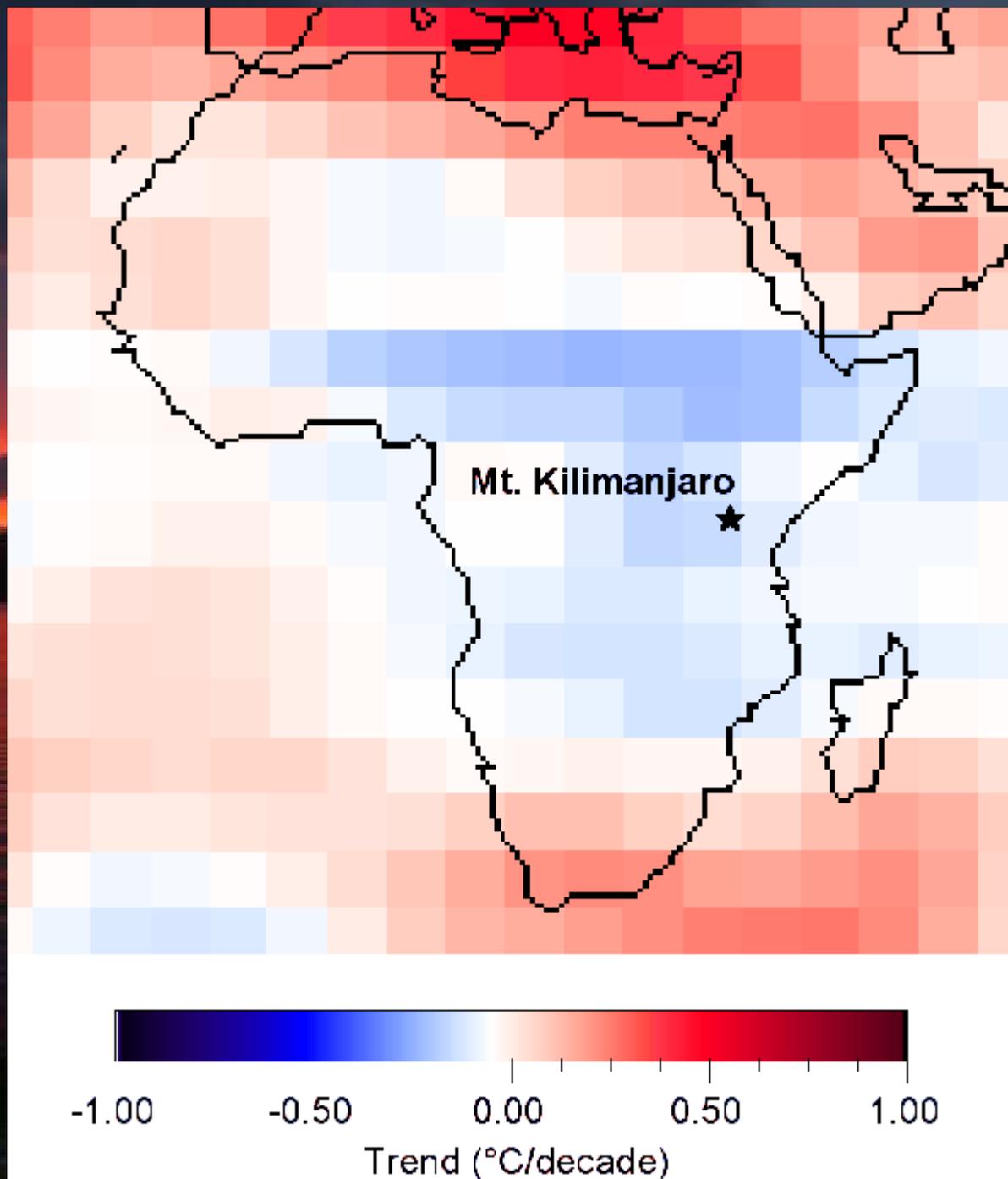
More ice ablated away before 1936 than after

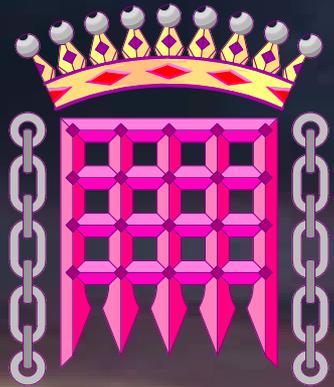




Cooling over Africa, 1979-2001

From NASA

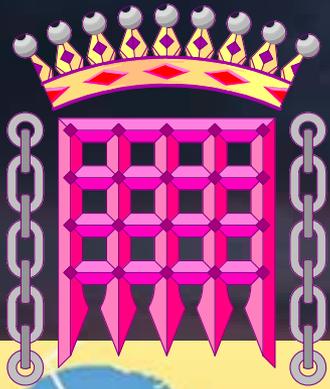




Kilimanjaro: the verdict

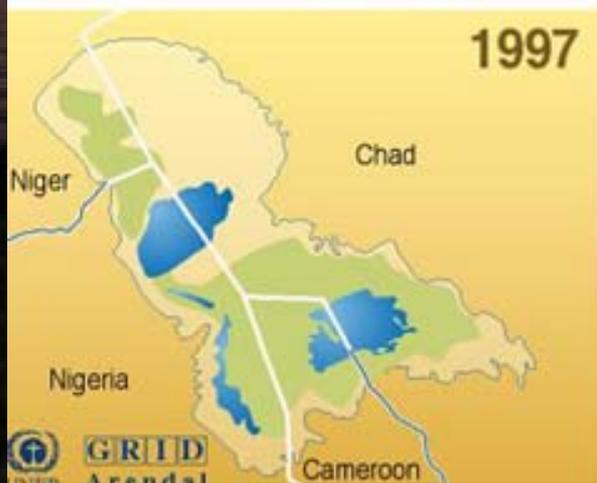


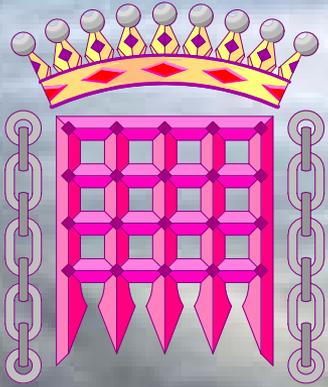
“Mr. Gore asserts that the disappearance of snow on Mt. Kilimanjaro is expressly attributable to global warming ... this is a point that specifically impressed Mr. Miliband. It is common ground, however, that **there is no evidence that the disappearance of snow on Mt. Kilimanjaro is attributable to global warming.**”



“Lake Chad ... has dried up”

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7





Lake Chad: the facts

4000 BC: area 400,000 km²

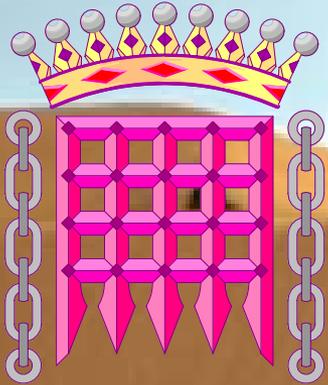
2007 AD: area is 1,360 km²

Average depth is only 3 m

Dry: 8500, 5500, 2000, 100 BC

Over-extraction is to blame

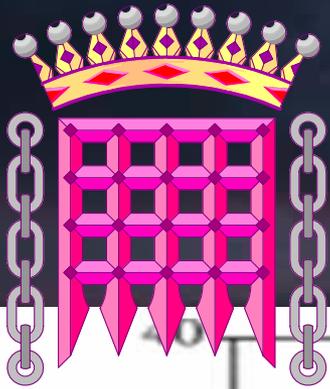
**Foley
& Coe
(2001)**



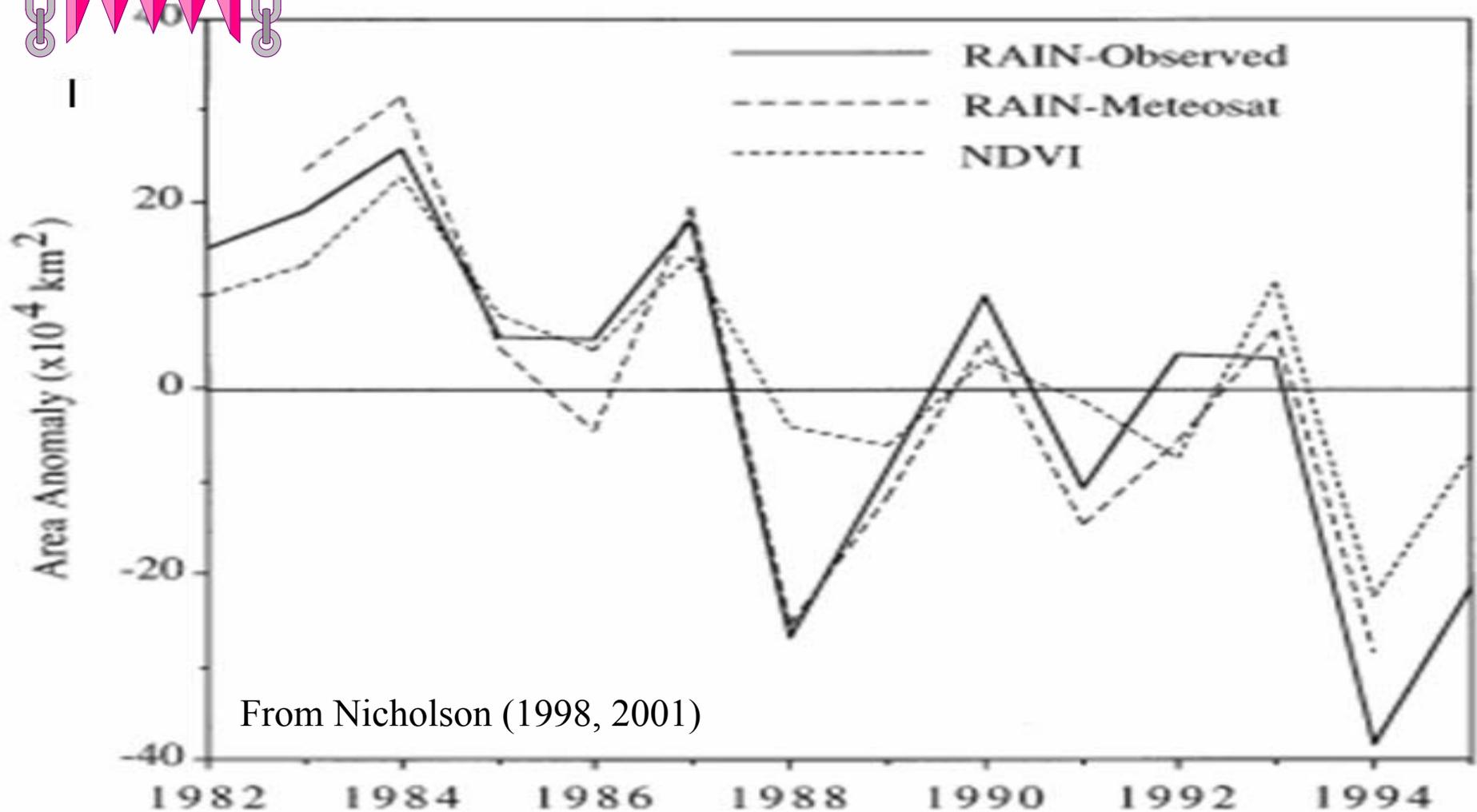
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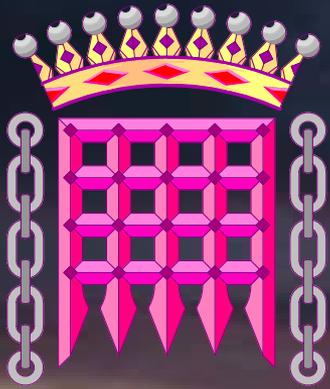
“Focus most of all on ... the edge of the Sahara. Unbelievable tragedies have been unfolding there ... One of the factors compounding this is the lack of rainfall and the increasing drought. ... Global warming ...sucks moisture out of the soil.”



The Sahara has shrunk by 300,000 km² since 1982

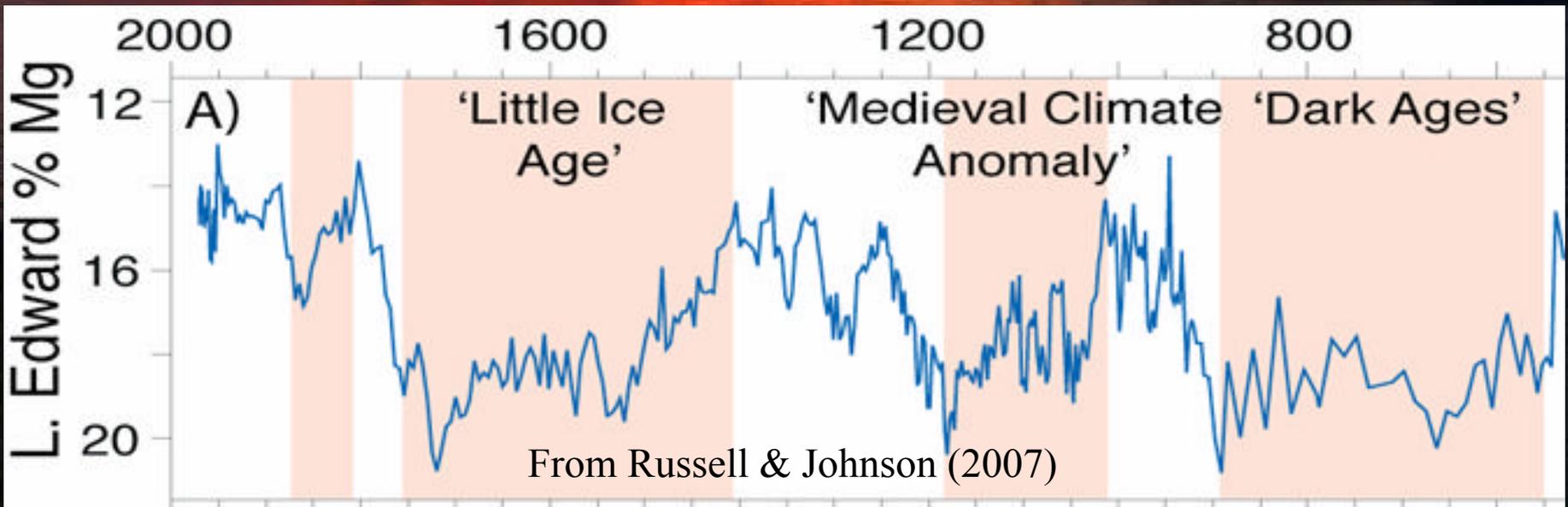


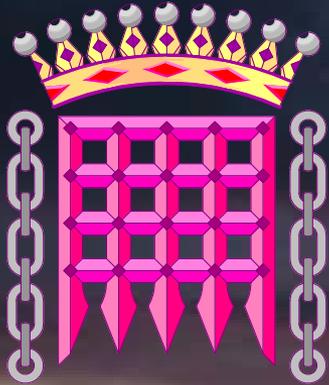
From Nicholson (1998, 2001)



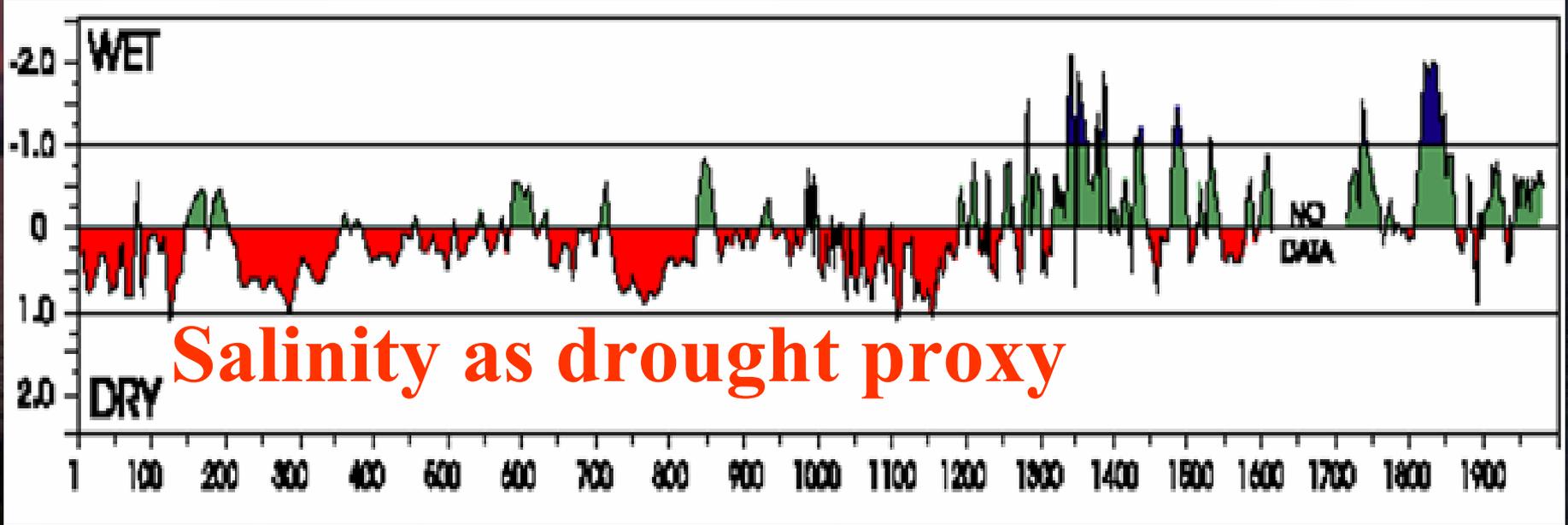
Russell &
Johnson
(2007)

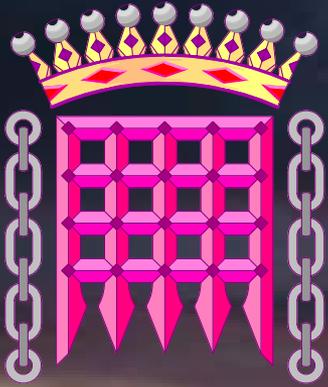
“Unless global warming is a mitigating factor (e.g., Treydte et al., 2006), central Africa is overdue for a return to decades-long droughts that exceed anything observed in the past century.”



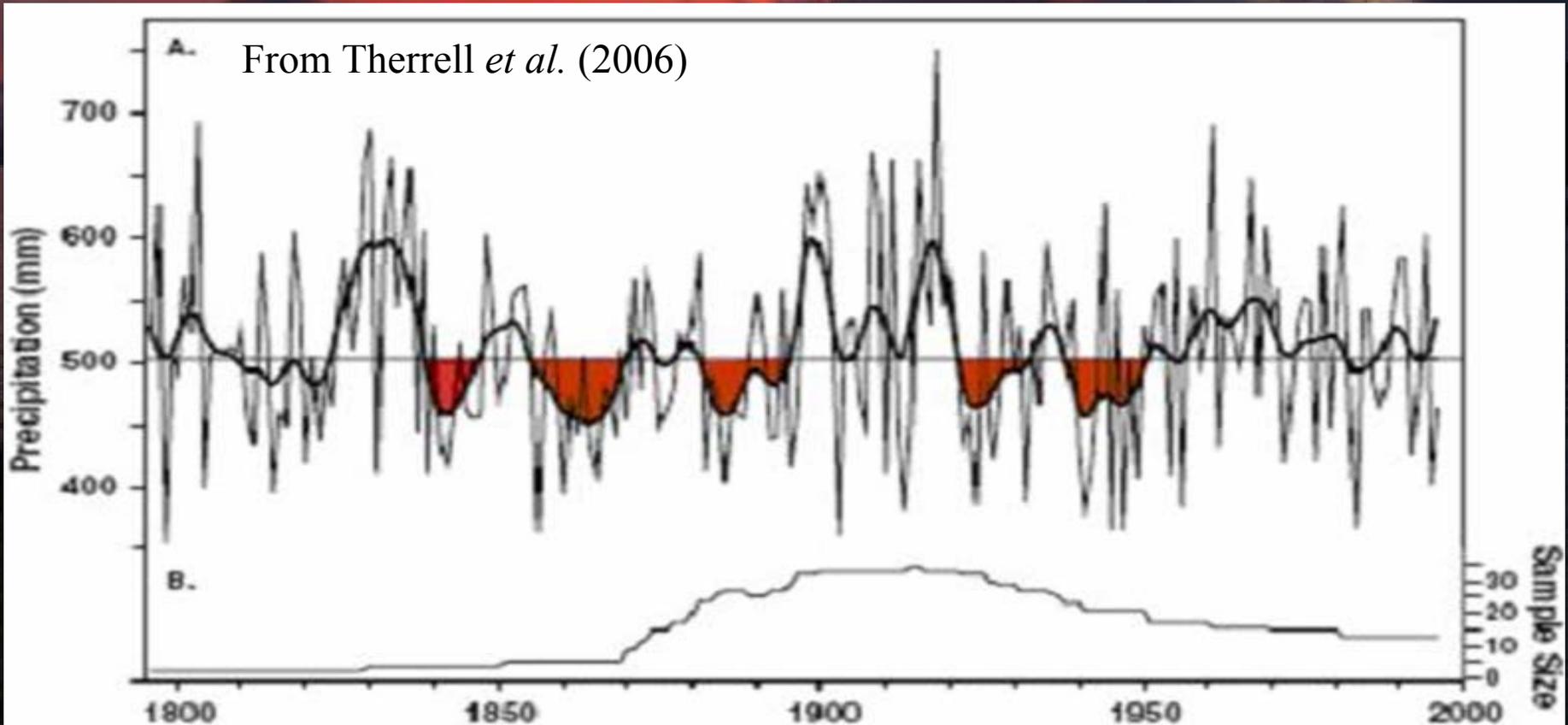


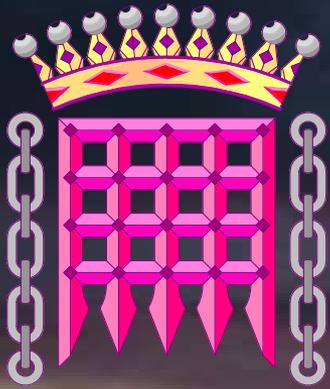
Drought until 1200 AD at Moon Lake, Great Plains





Stable rainfall since 1950 in southern Africa





ERROR 9

“Flooding in Asia, Mumbai, India this past July [2005]: 37 inches of rain in 24 hours, by far the largest downpour that any city in India has ever received.”

Since Losing The Presidential Election, Al Gore Has Got The Blues....

VIAGRA BLUES THAT IS!

VIAGRA
(sildenafil citrate) tablets

REGISTEREDPHARMACIA.ORG

67% Presidential Candidate **LOSERS** Suffering From Erectile Dysfunction By Party Affiliation

- Democrat
- Republican
- 3rd Party

Coming off a losing election and grueling campaign schedule, Vice President Al Gore may have difficulty performing more than a "kiss"...

ex-VIAGRA Spokesperson

Senator and Losing Republican Presidential Candidate Bob Dole

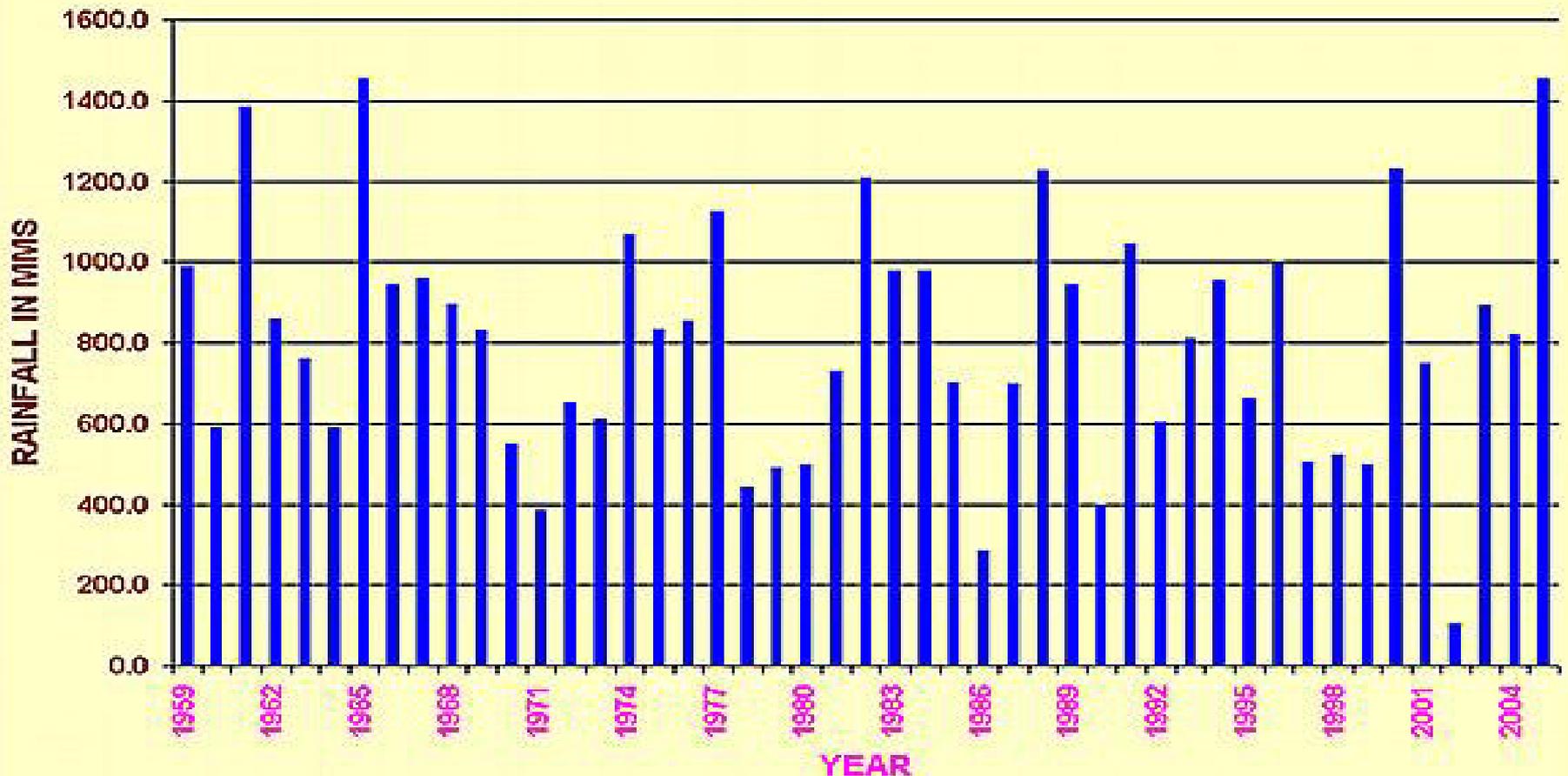
THE POLLS ARE DOWN, **VIAGRA** BUT YOU'RE UP!

(sildenafil citrate) tablets



No increase in rainfall in Mumbai since 1959 ...

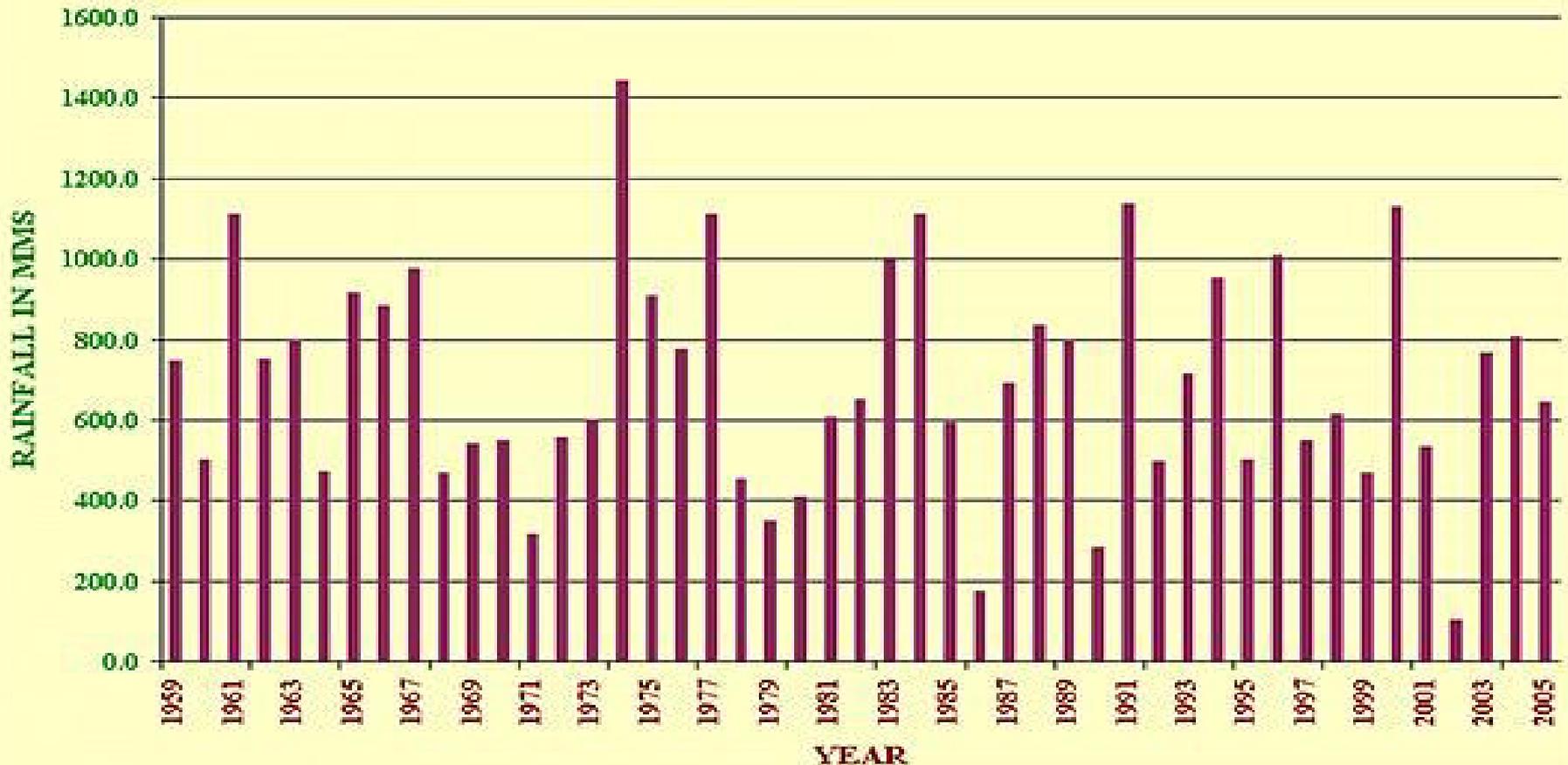
MONTHLY TOTAL RAINFALL OVER SANTACRUZ IN JULY (1959-2005)

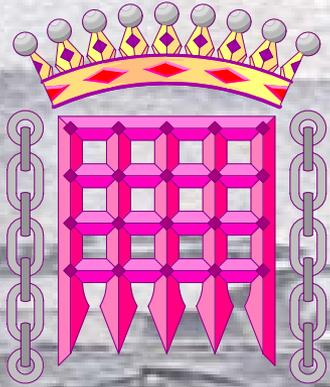




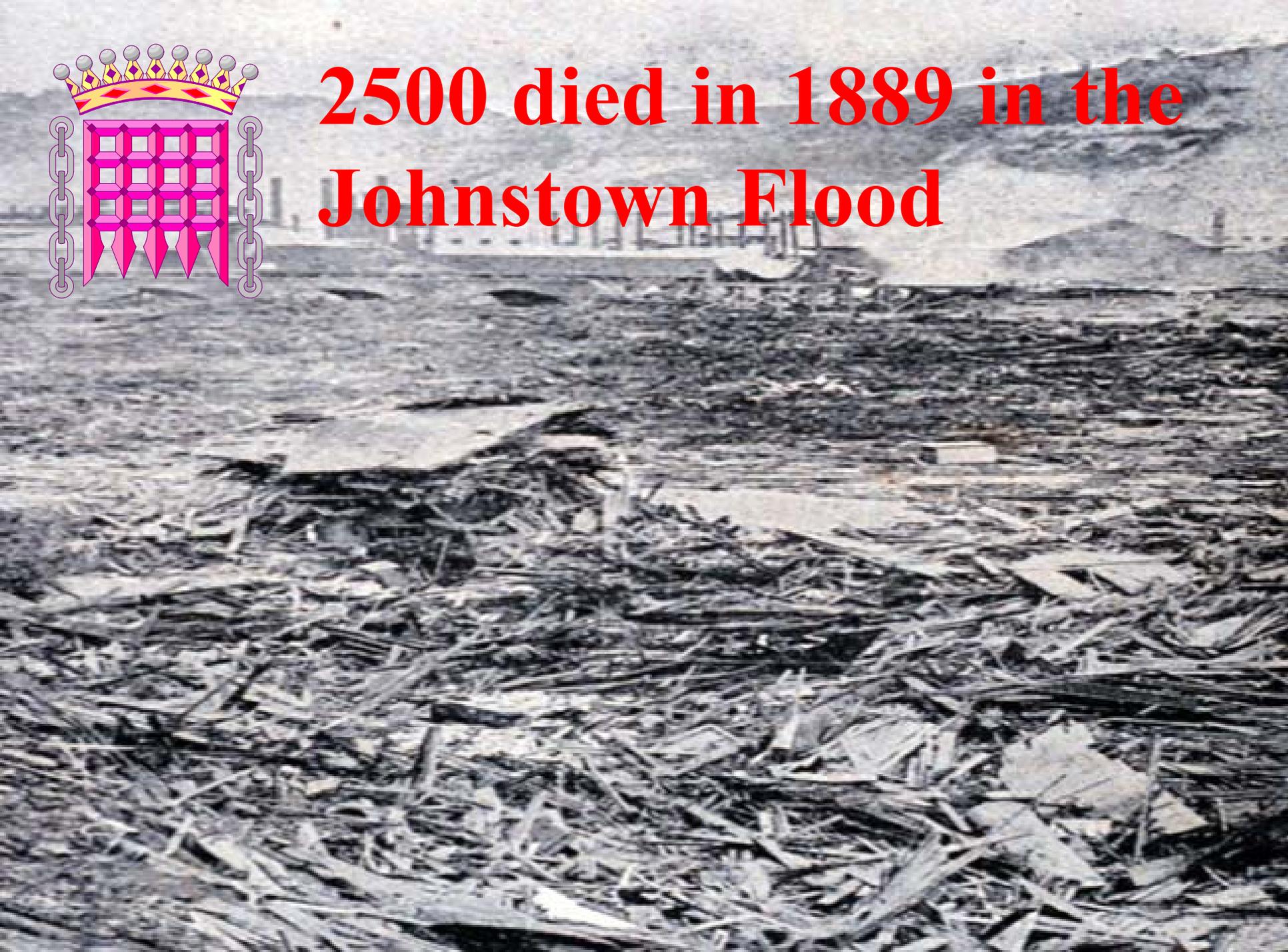
... & no rainfall increase at a 2nd Mumbai station

MONTHLY TOTAL RAINFALL OVER COLABA IN JULY (1959 - 2005)

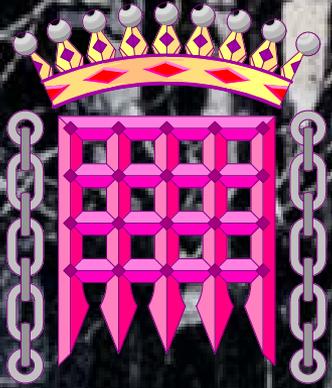


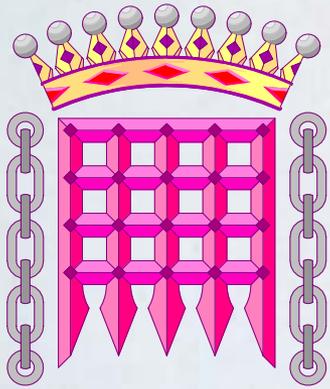


**2500 died in 1889 in the
Johnstown Flood**



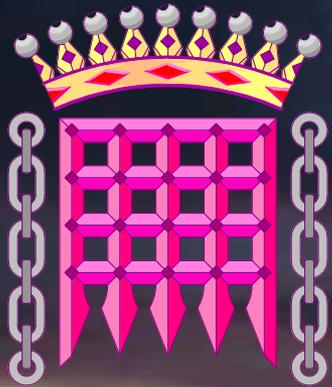
527 flood deaths in Dayton, OH, 1913





Smith's Bridge, NC, 1916





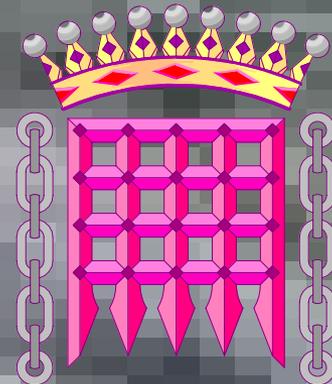
Drought & flood: the verdict



“The drying up of Lake Chad is used as a prime example of a catastrophic result of global warming. There is no evidence that this is so. It is ... far more likely to result from other factors, such as population increase and over-grazing, and regional climate variability.”

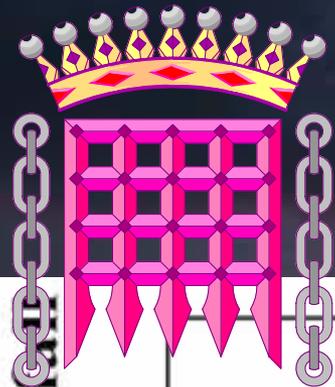


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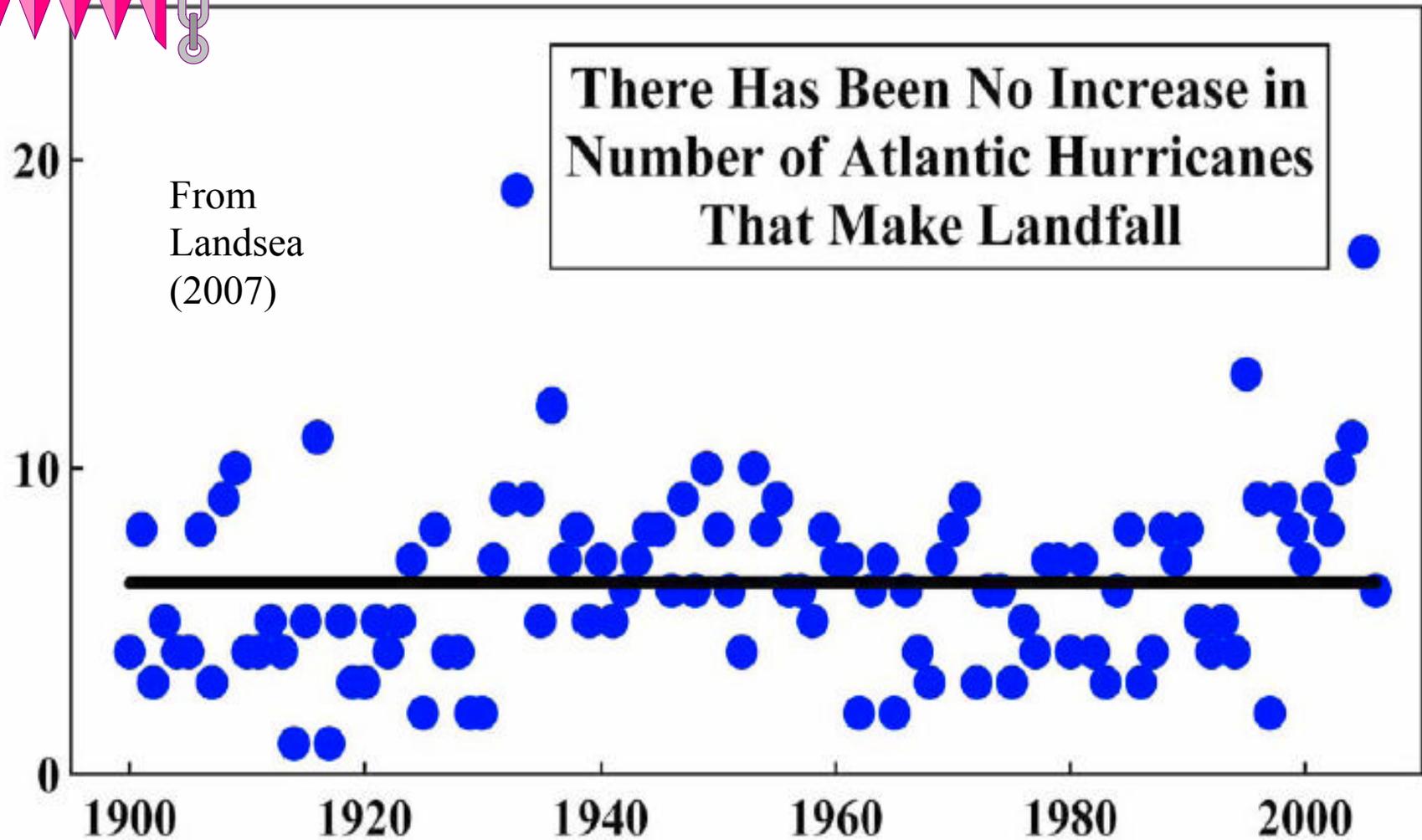


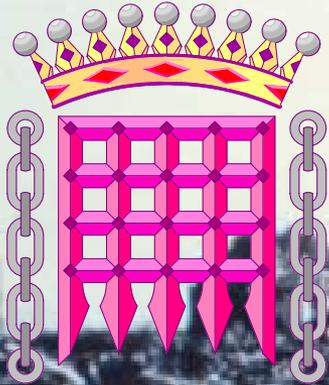
“We have seen in the last couple of years a lot of big hurricanes ... And then of course came Katrina ... We ... need to decide how we react when we hear warnings from the leading scientists in the world.”

A zero increase in hurricane landfall

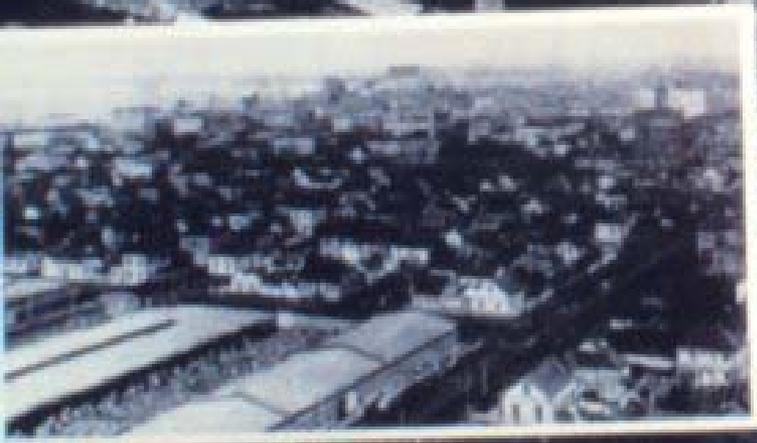
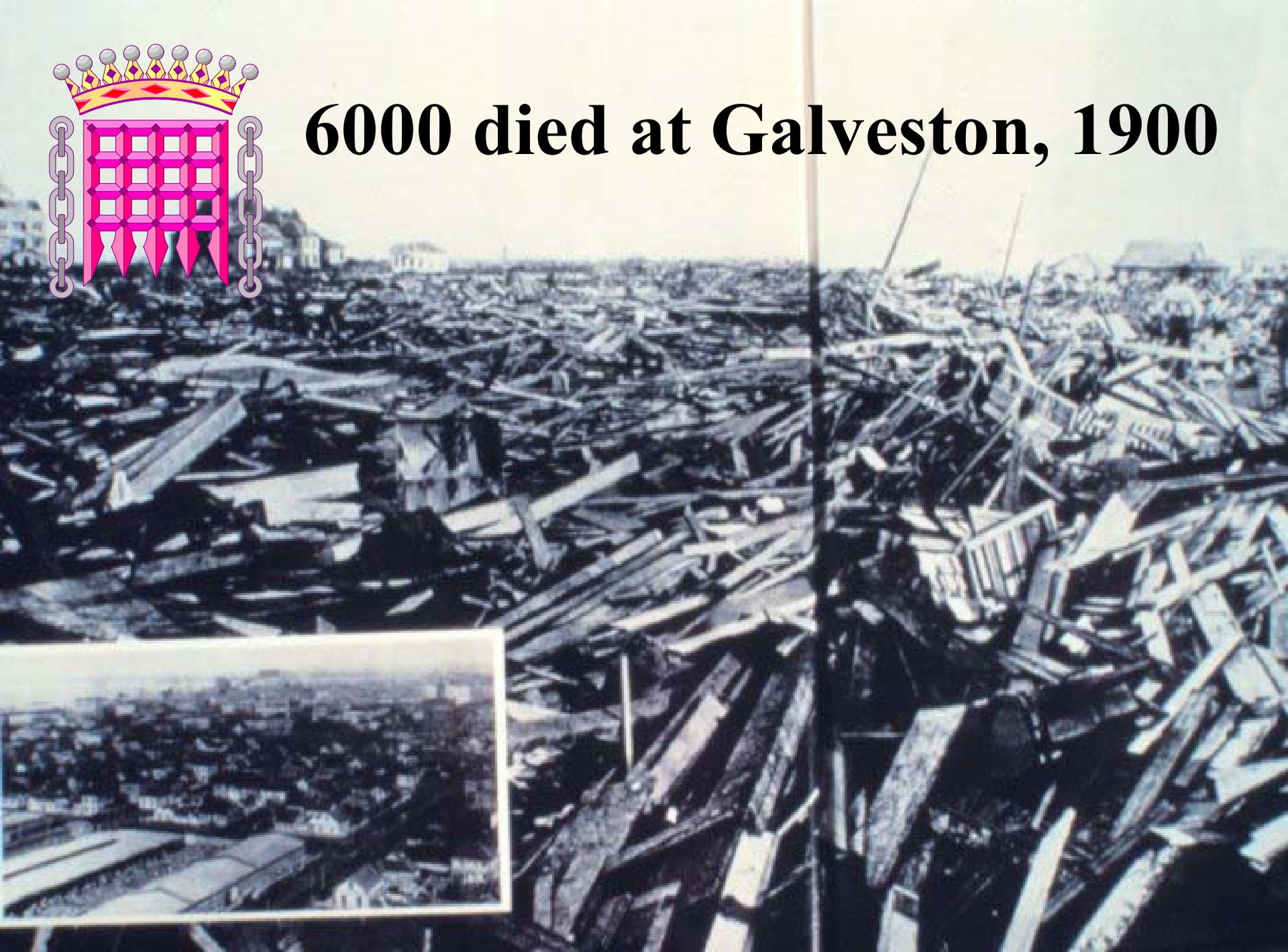


Hurricanes That Made Landfall

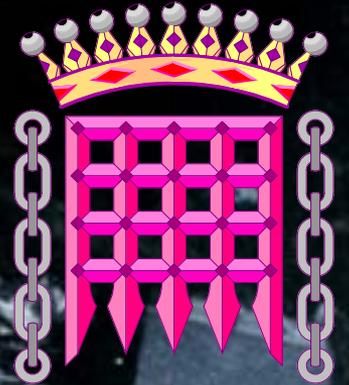


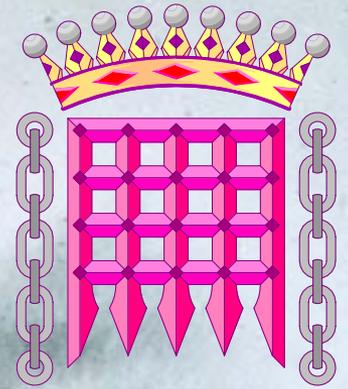


6000 died at Galveston, 1900

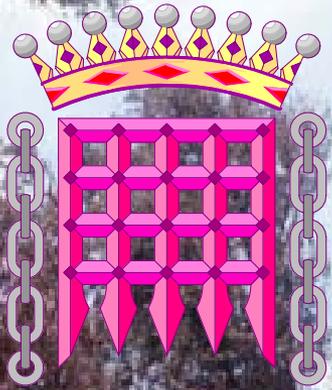


New England, 1938





New England, 1938



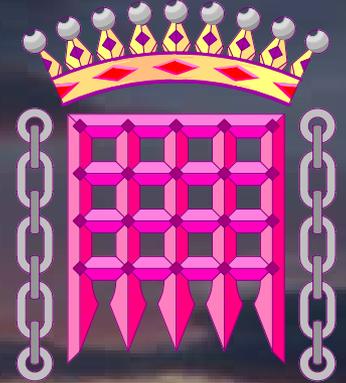
Hurricane Camille, Mississippi, 1969



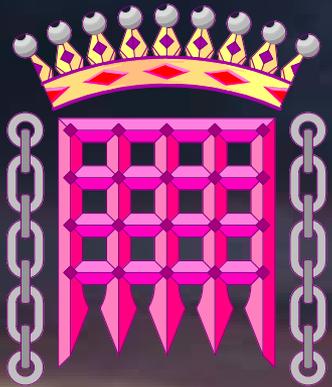
“The science textbooks that have to be rewritten because they say it is impossible to have a hurricane in the South Atlantic.”



Global warming did not cool the sea and the air



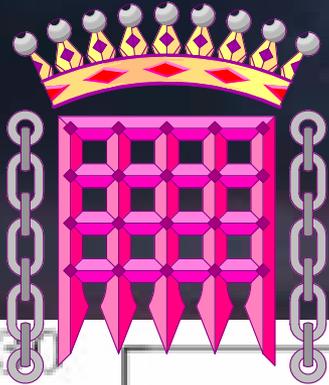
In 2004, Brazil's summer sea surface temperatures were cooler than normal. However, air temperatures were "the coldest in 25 years." The air was so much colder than the water that it caused a heat flux from the water to the air similar to that which fuels hurricanes in warm seas.



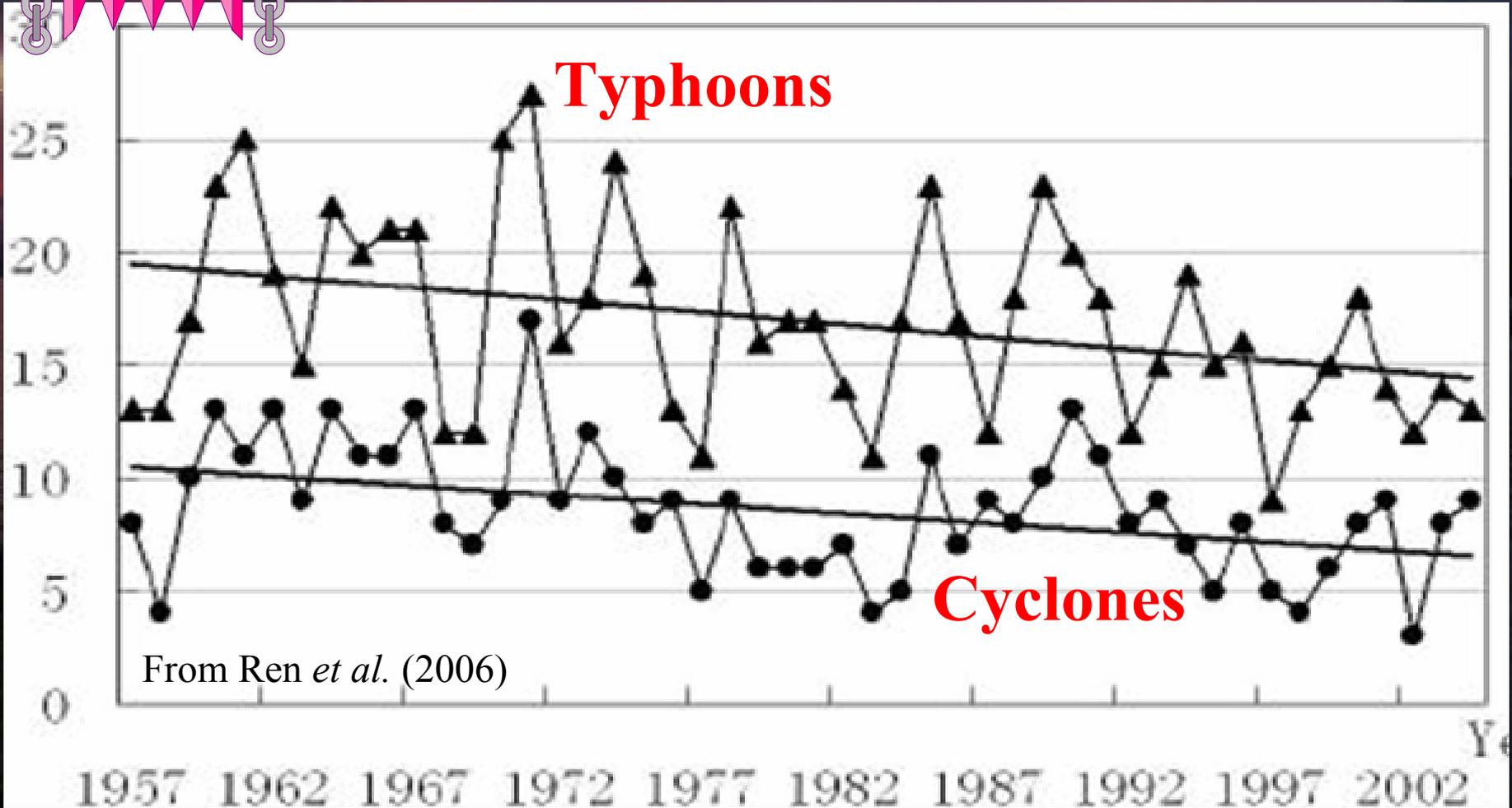
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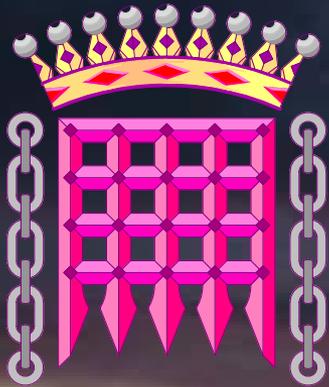
“Japan again didn’t get as much attention in our news media, but they set an all time record for typhoons”



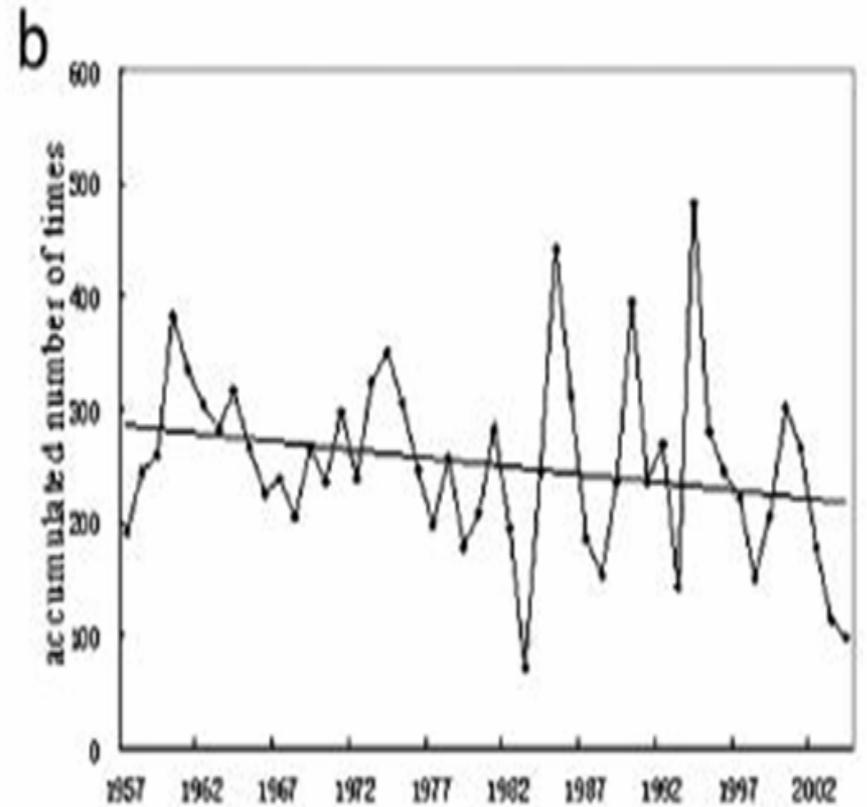
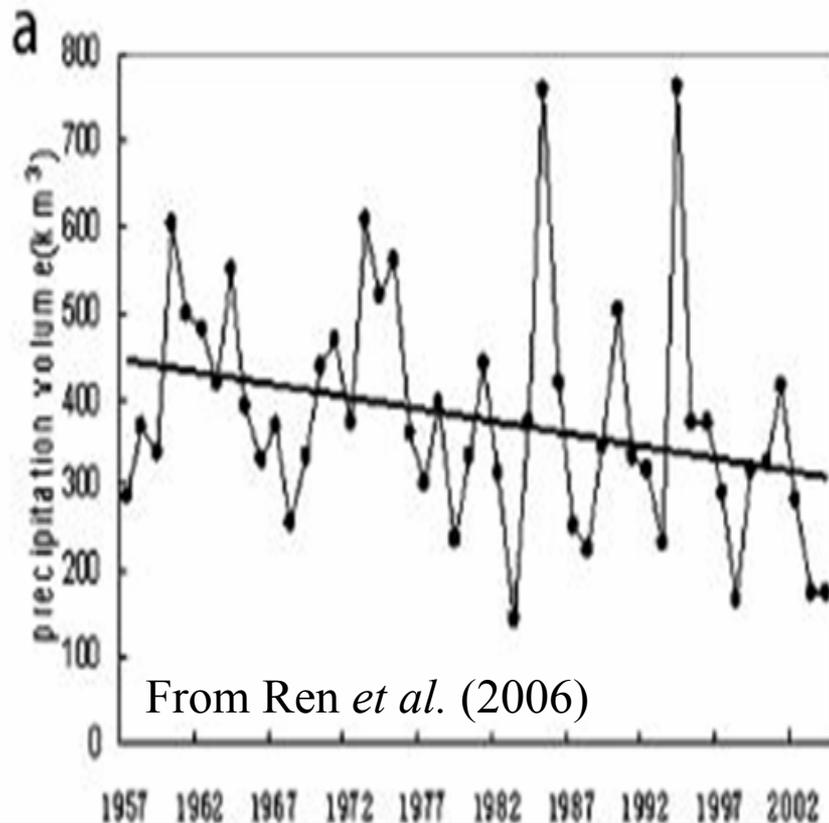


Fewer intense typhoons and cyclones





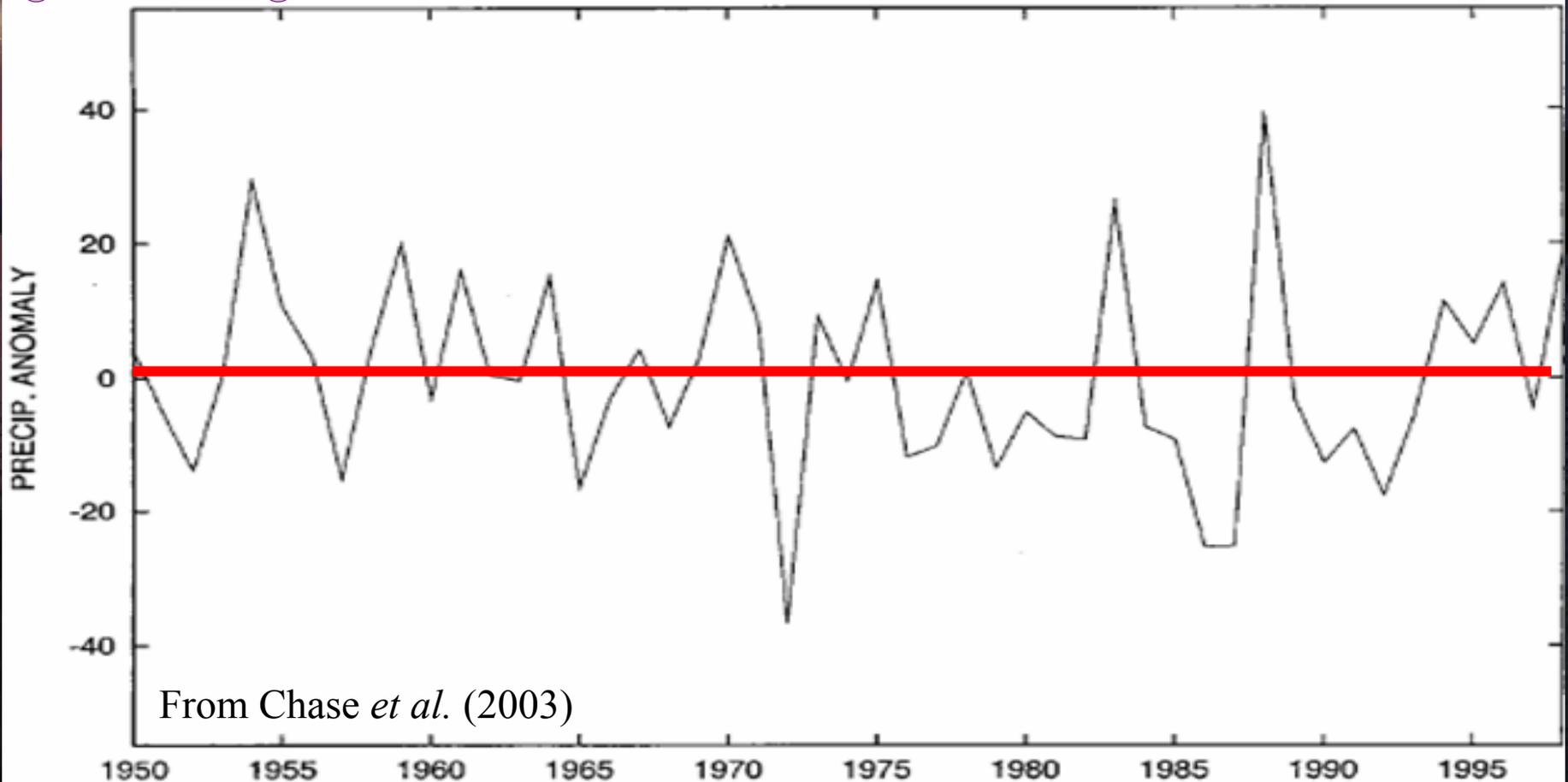
Less rainfall from tropical cyclones

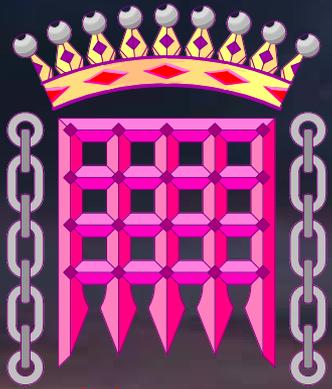




No trend in monsoon precipitation

S.E. ASIA LAND SURFACE PRECIPITATION





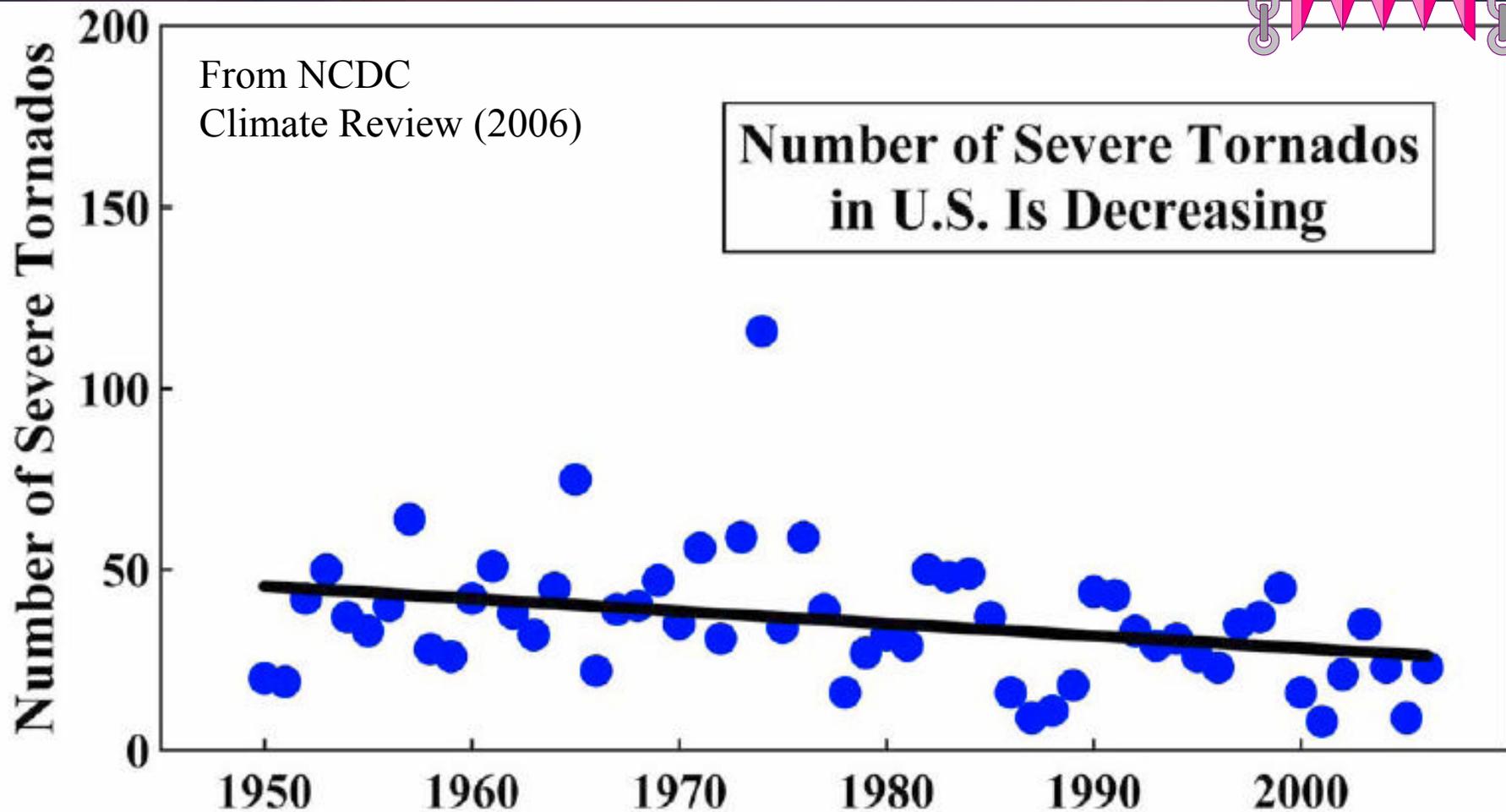
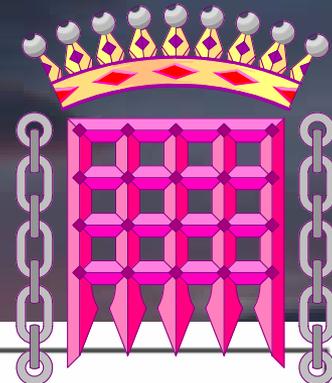
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**“We also set
an all time
record for
tornadoes in
the United
States.”**

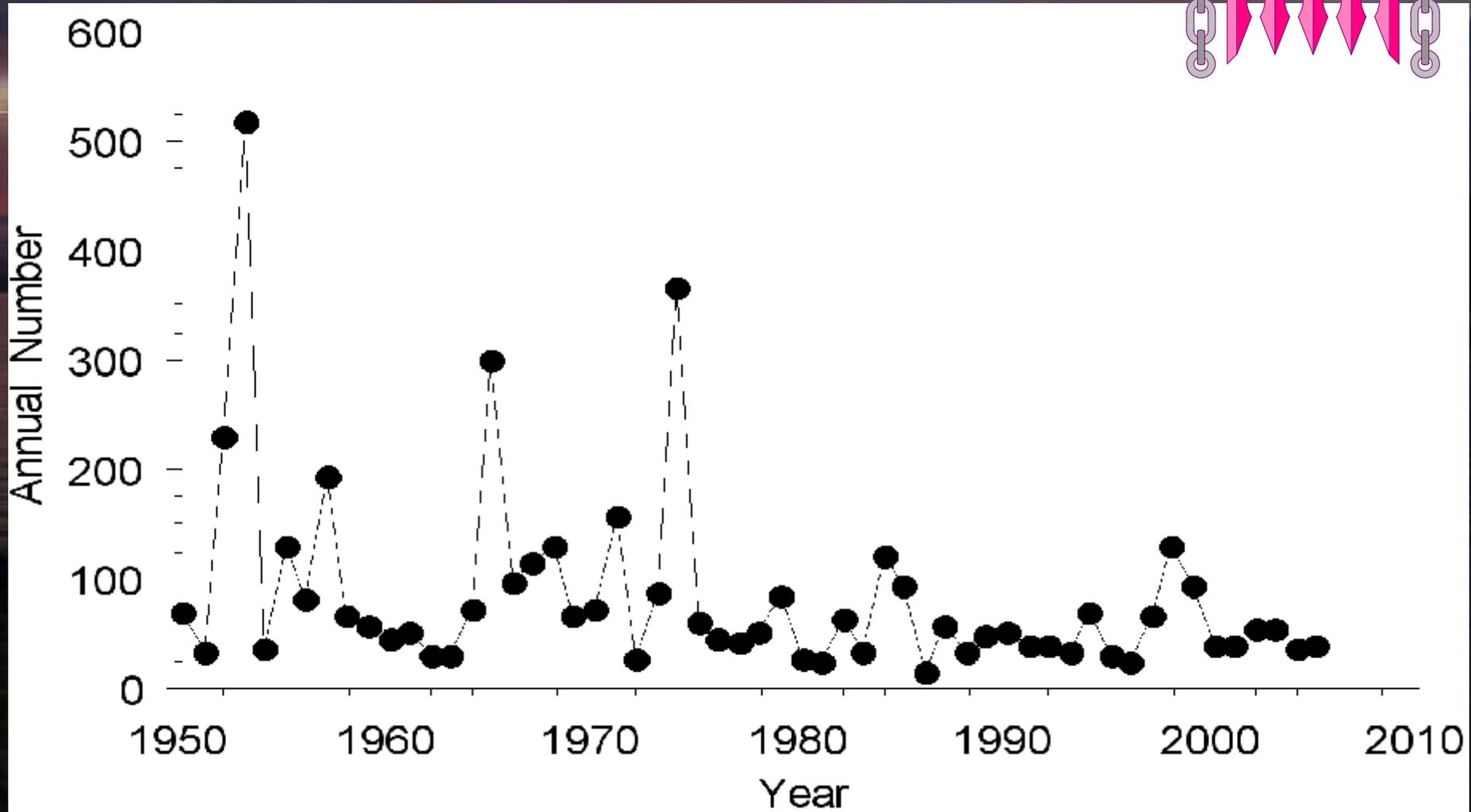
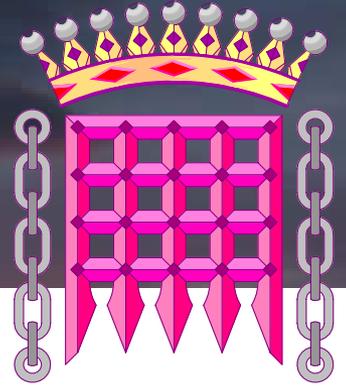


REGISTERED@AOL.COM

Fewer severe US tornadoes

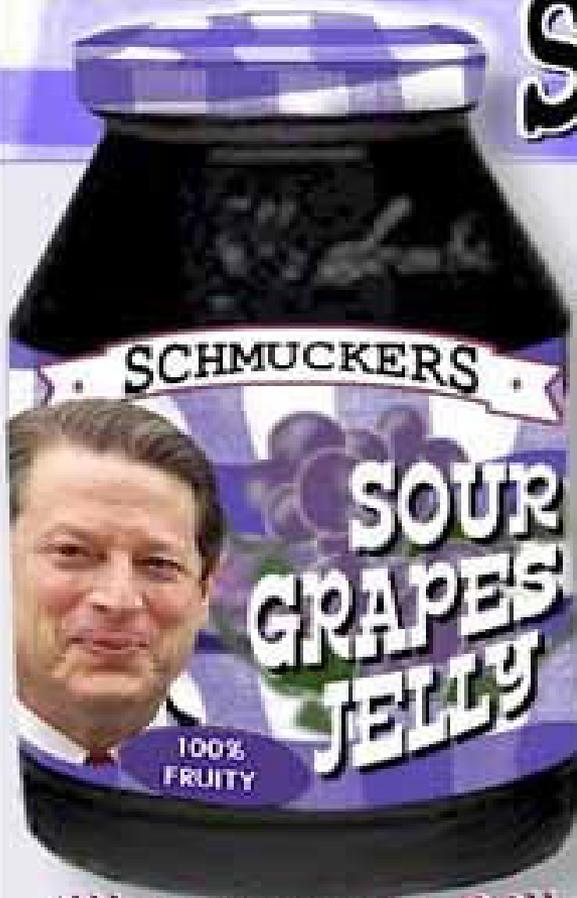


US tornado deaths are also falling



SCHMUCKERS

SOUR GRAPES JELLY



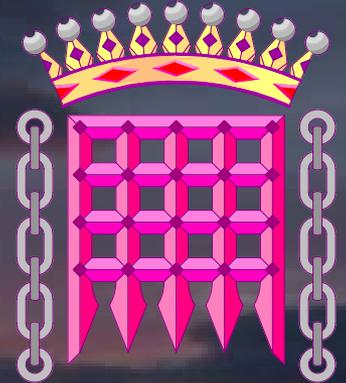
Pucker up and enjoy the
Supremely good flavor of
Sour Grapes Jelly

BOISENBERRY
COMING SOON

Demo crates full of
Sour Grapes Jelly are
on display everywhere!

REGISTER@AOL.COM

With a name like SCHMUCKERS, it has to cheat good...

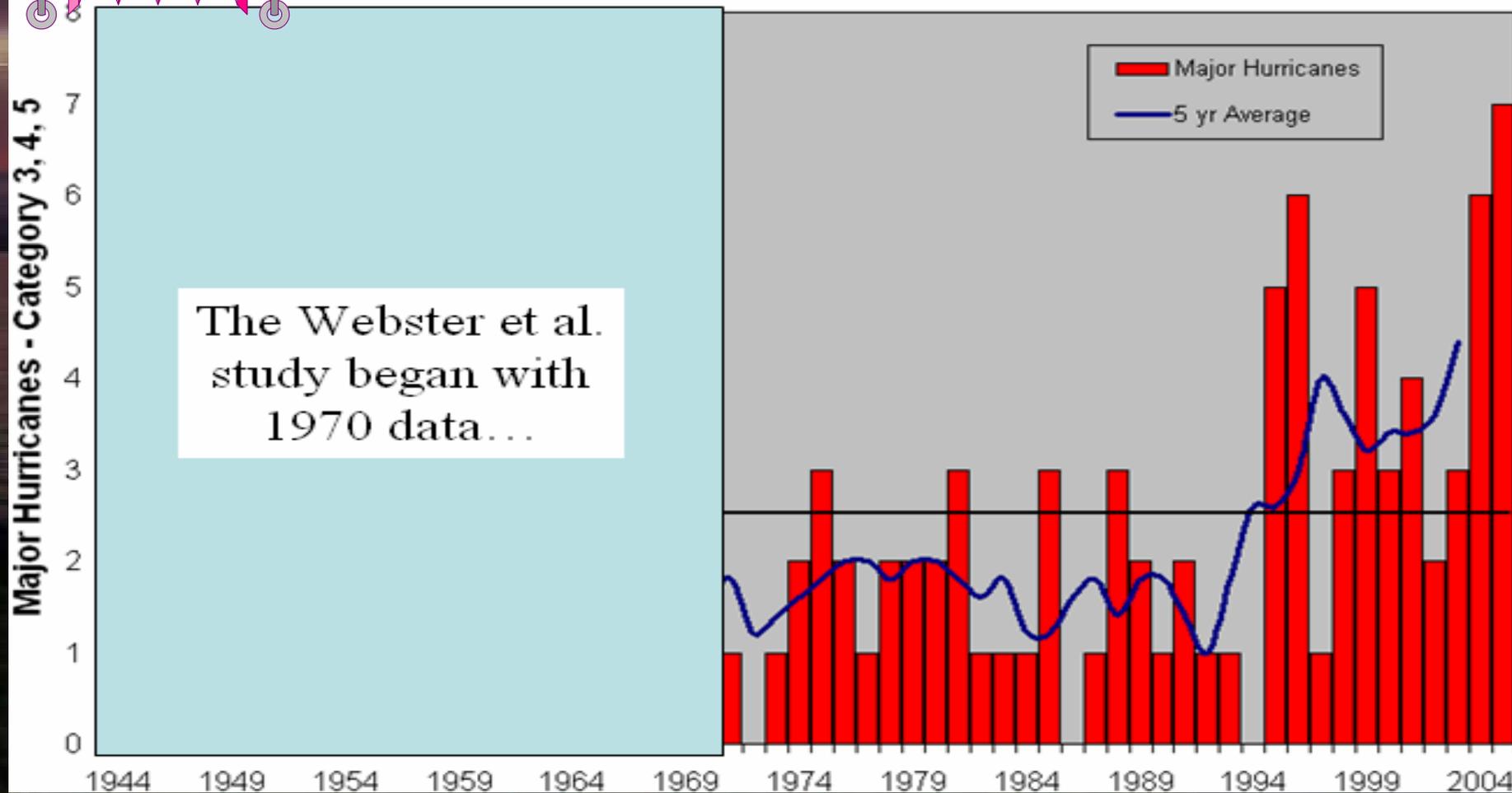


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14

“There had been warnings that
hurricanes would get stronger”

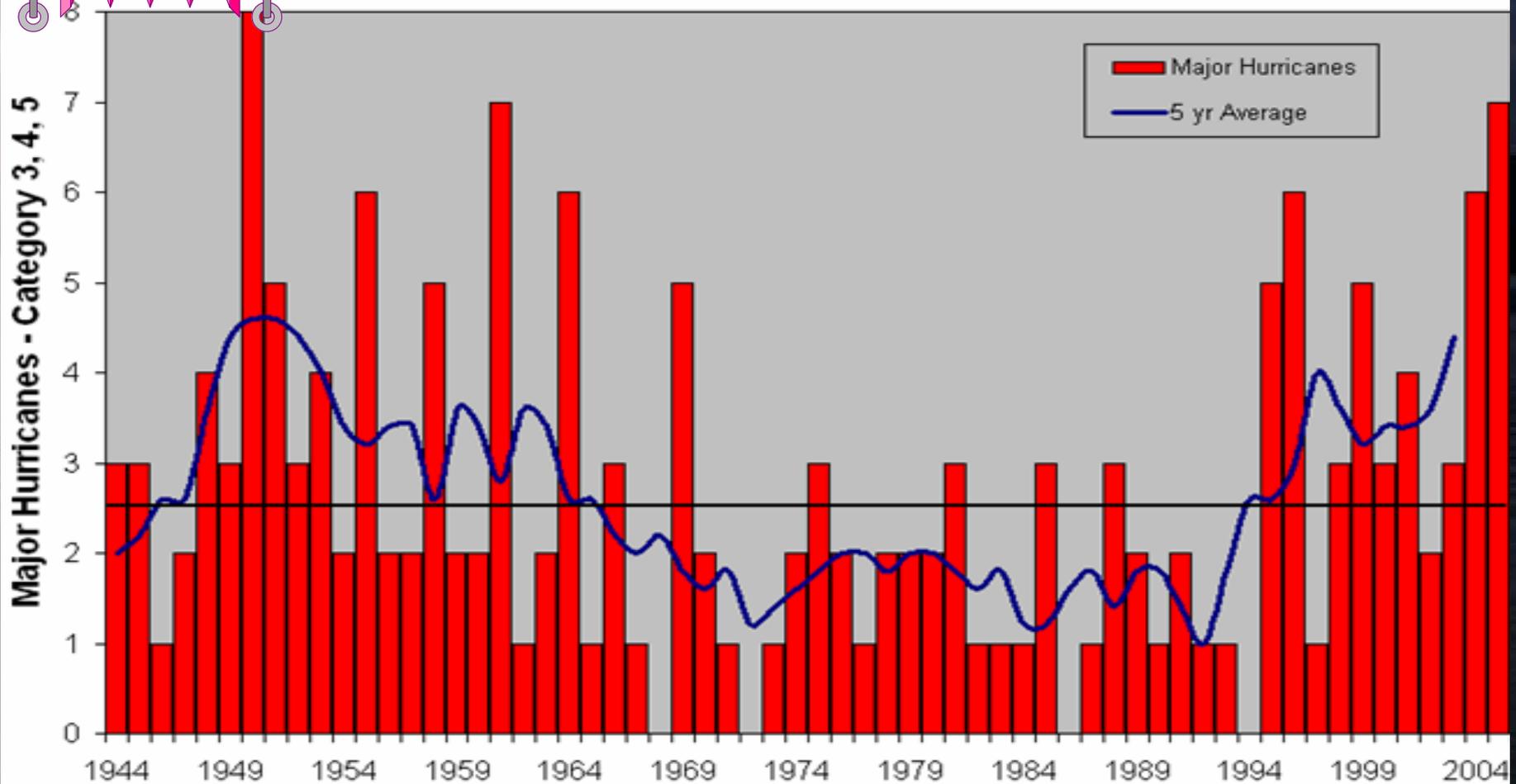
Part of the story ...

Atlantic Major Hurricanes 1944 to 2005

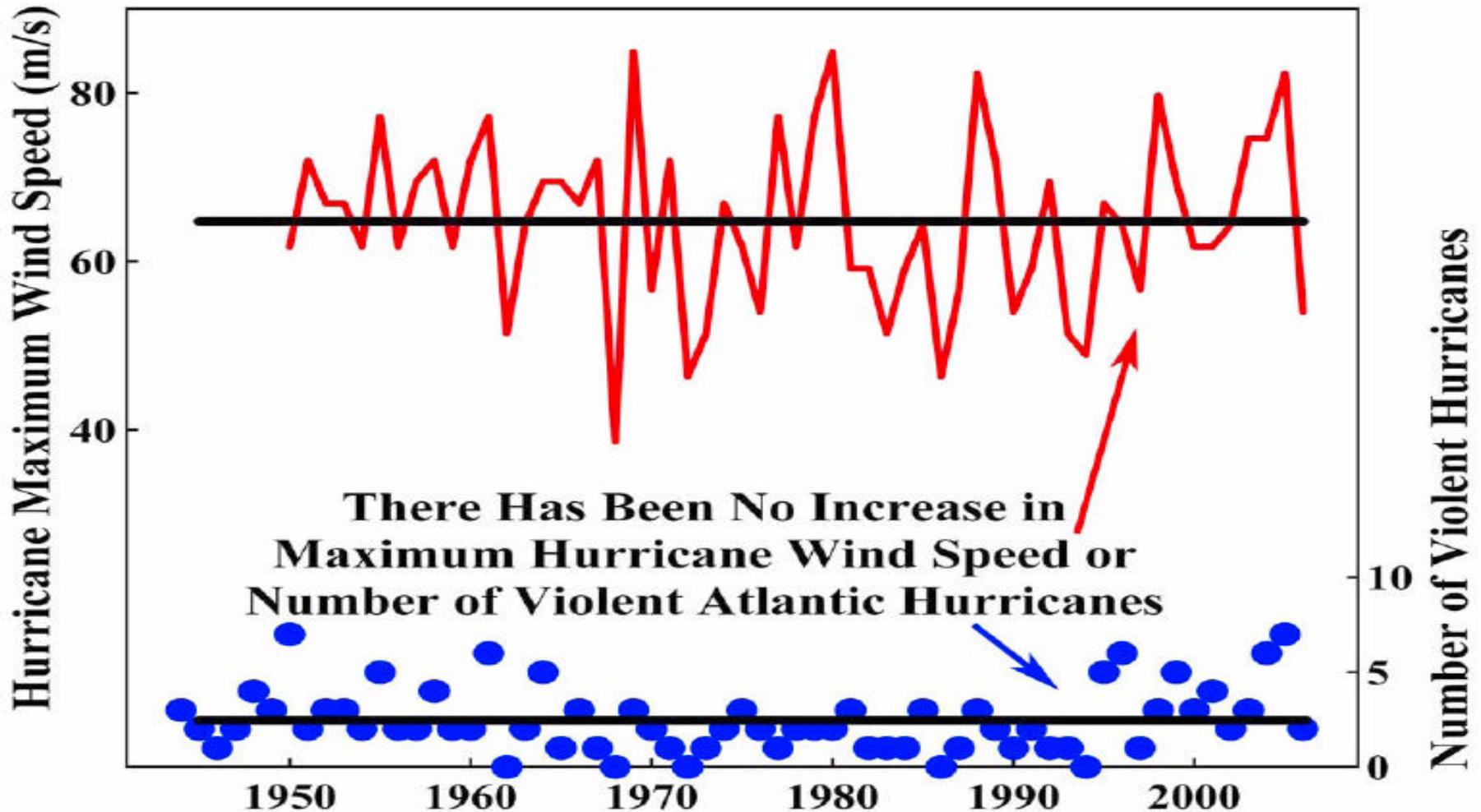


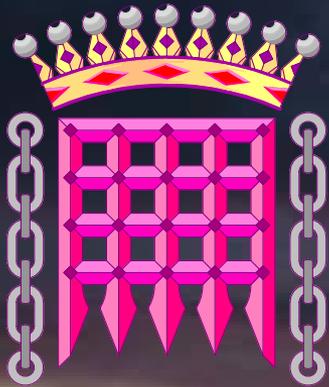
... and the whole story

Atlantic Major Hurricanes 1944 to 2005



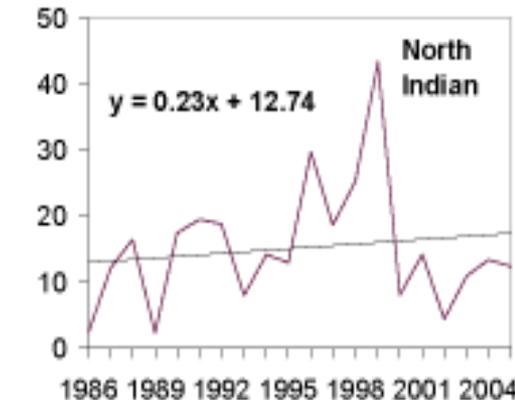
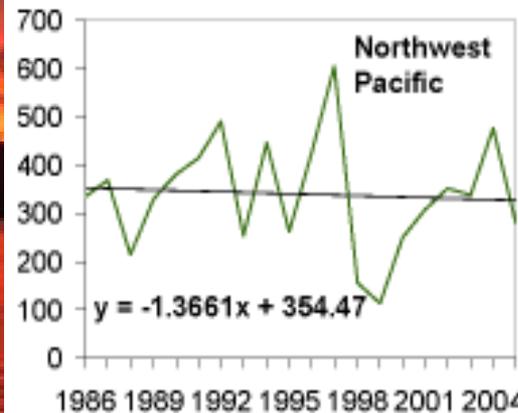
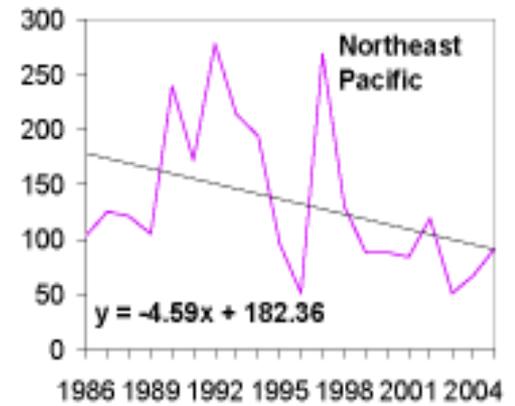
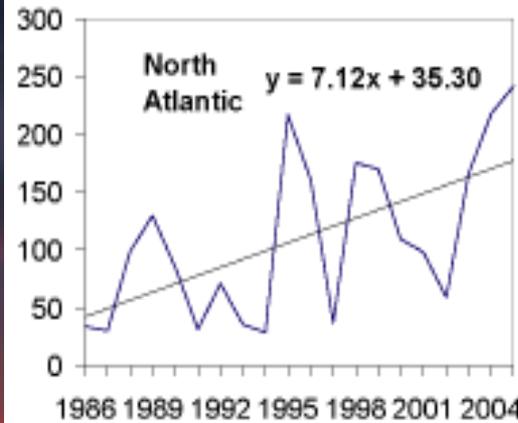
Hydrocarbon use +6fold, but hurricanes unaffected



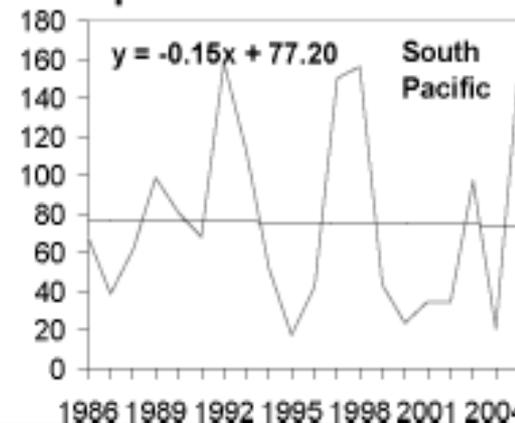
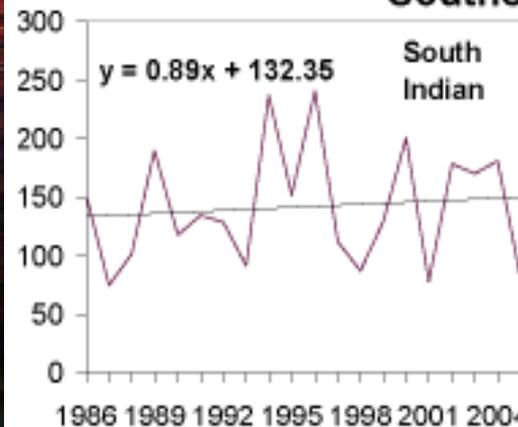


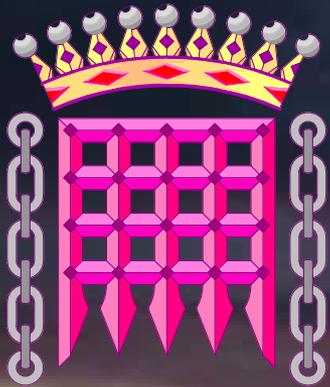
**Accumulated
Cyclone
Indices,
1986-2004:
no trend
Klotzbach (2006)**

Northern Hemisphere

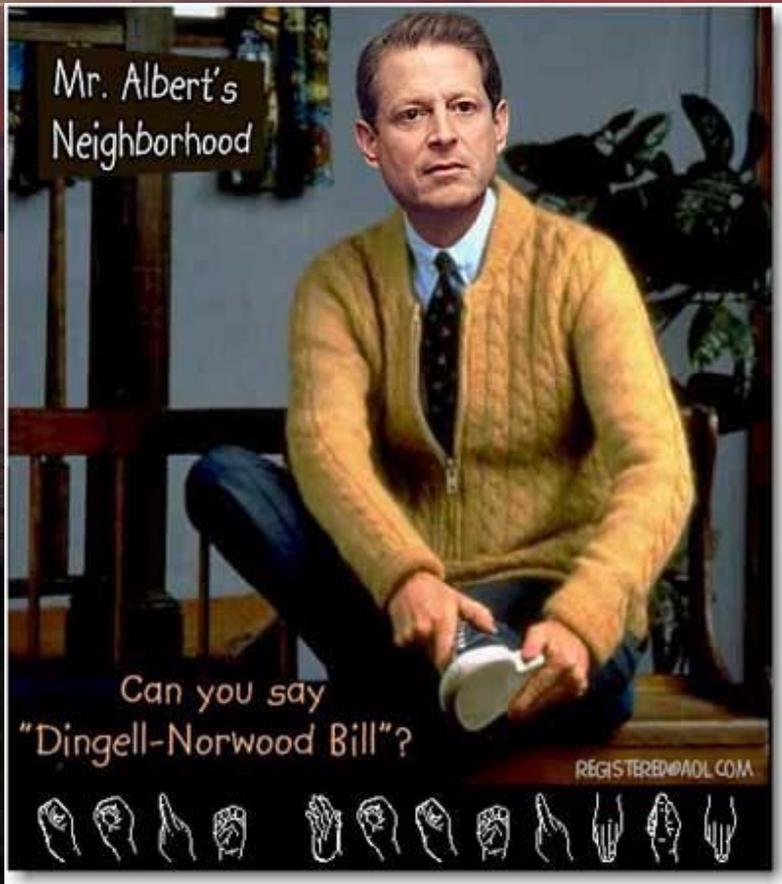


Southern Hemisphere



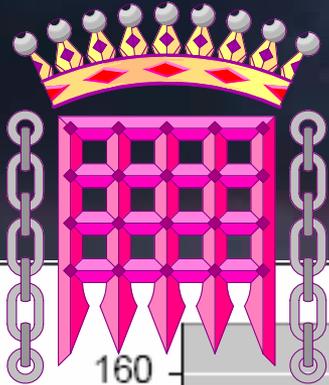


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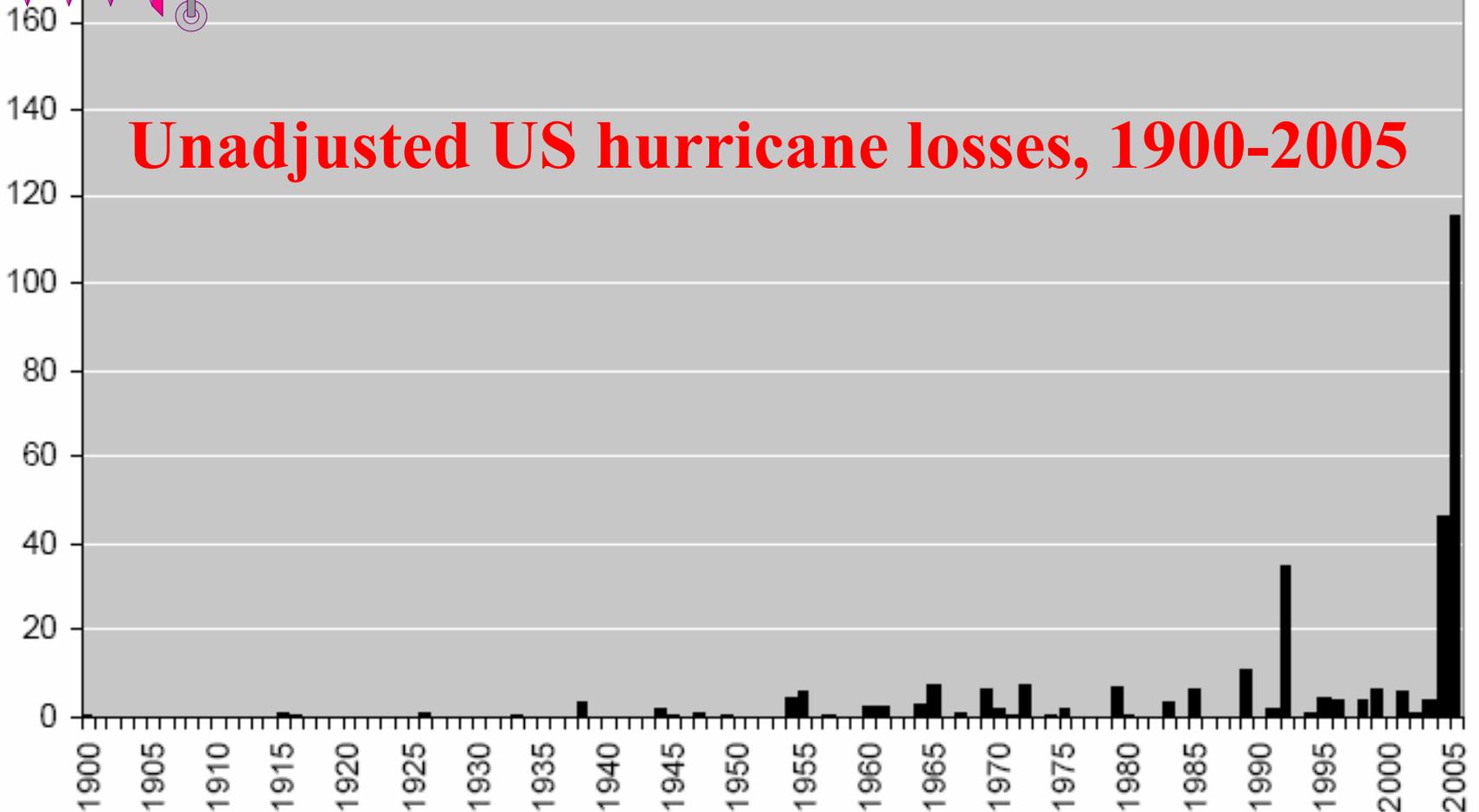
“The insurance industry ... recovered losses are going up. See the damage from these severe weather events.”

Part of the story ...

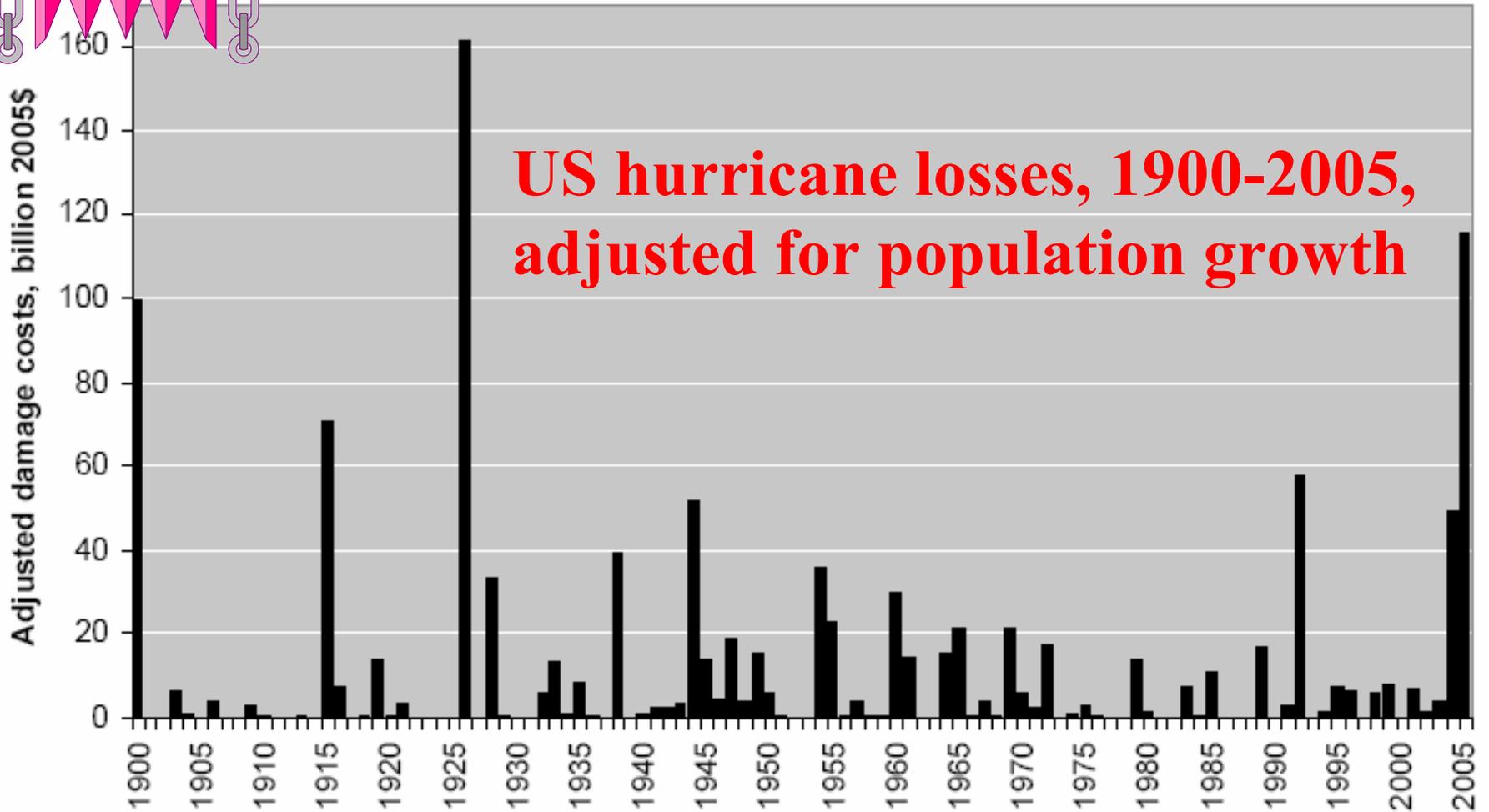
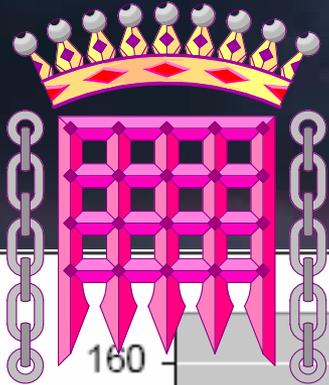


Damage costs, billion 2005\$

Unadjusted US hurricane losses, 1900-2005



... and the whole story

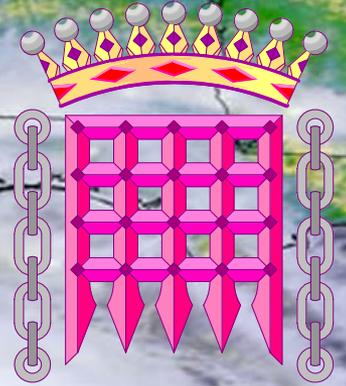




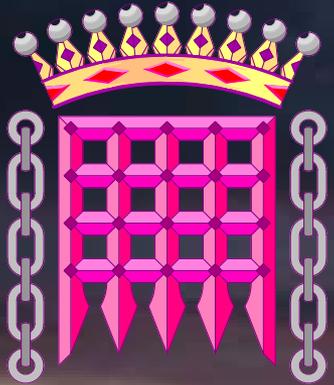
Hurricane Katrina (Cat-5)
NOAA-18 AVHRR 1 km
August 28, 2005 @ 1950 UTC

**“There is nothing
in the U.S.
hurricane damage
record that
indicates ‘global
warming’ has
caused a
significant increase
in destruction
along our coasts.”**

Pielke et al. (2008)



**DON'T
PANIC**

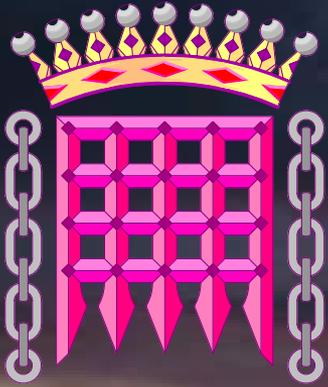


Cyclones: the verdict

**“Hurricane Katrina
and the consequent
devastation in New
Orleans is ascribed
to global warming.**

**It is common ground that there is
insufficient evidence to show that.”**

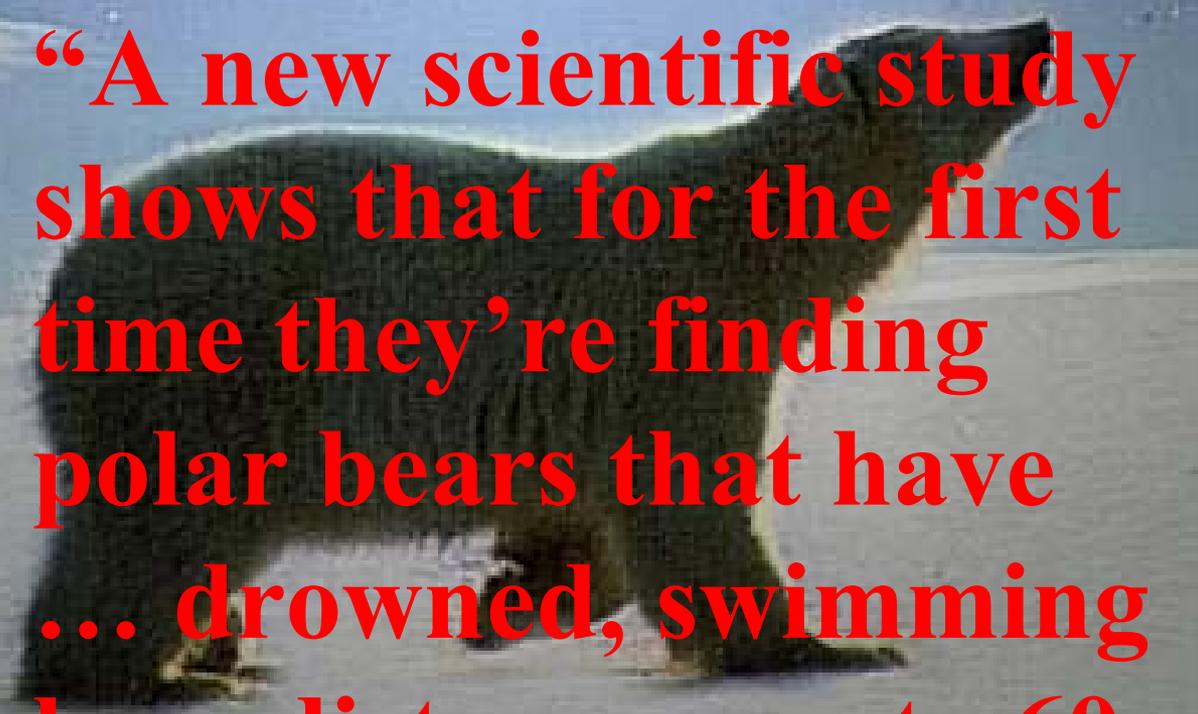




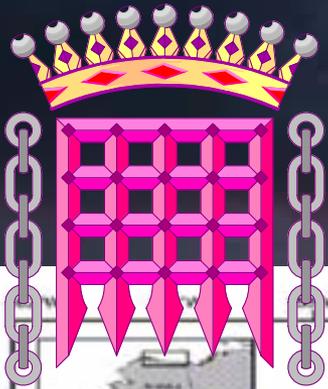
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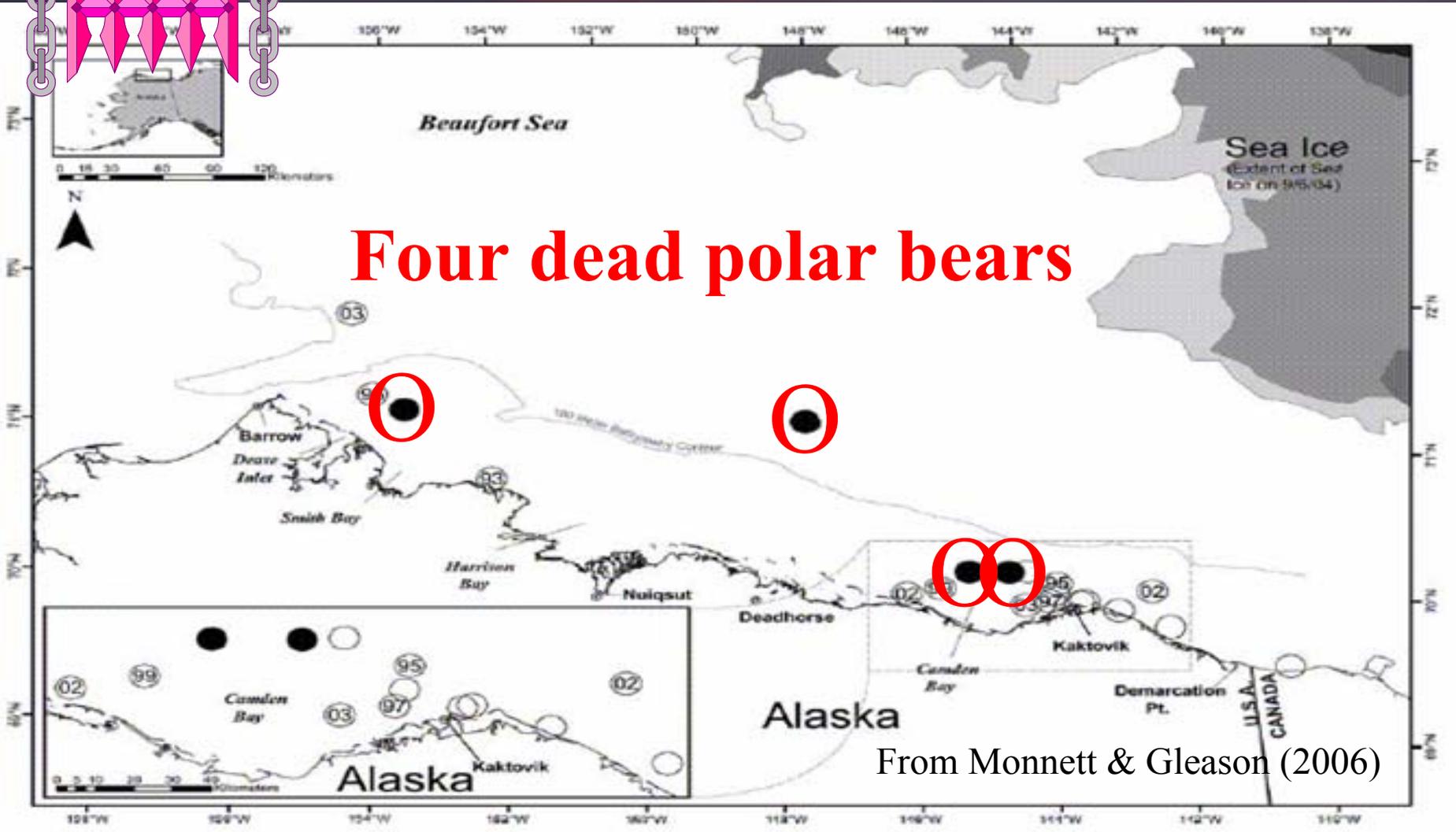
“A new scientific study shows that for the first time they’re finding polar bears that have ... drowned, swimming long distances up to 60 miles to find the ice.”



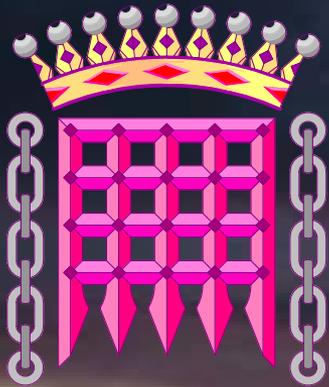
“High sea states associated with stormy weather”



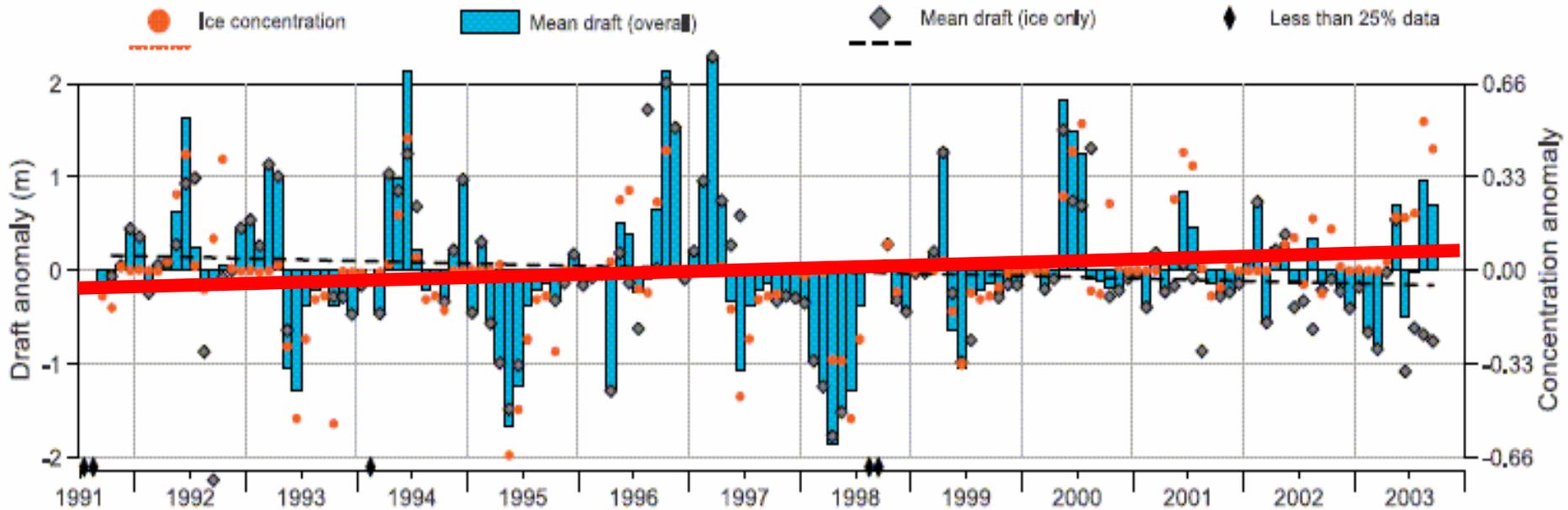
Four dead polar bears

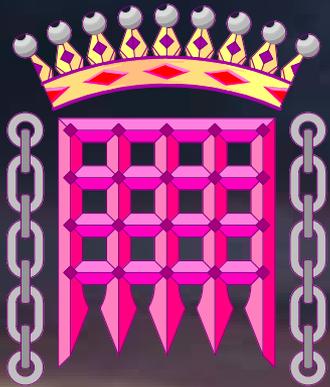


From Monnett & Gleason (2006)

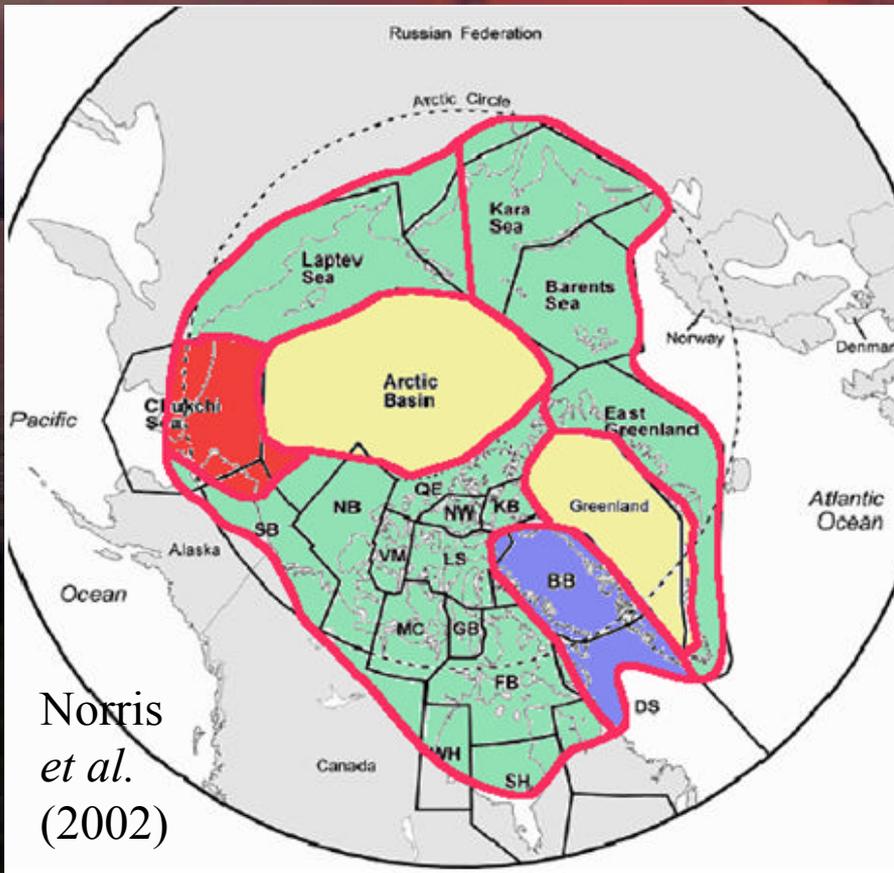


Beaufort sea-ice extent is increasing, not declining

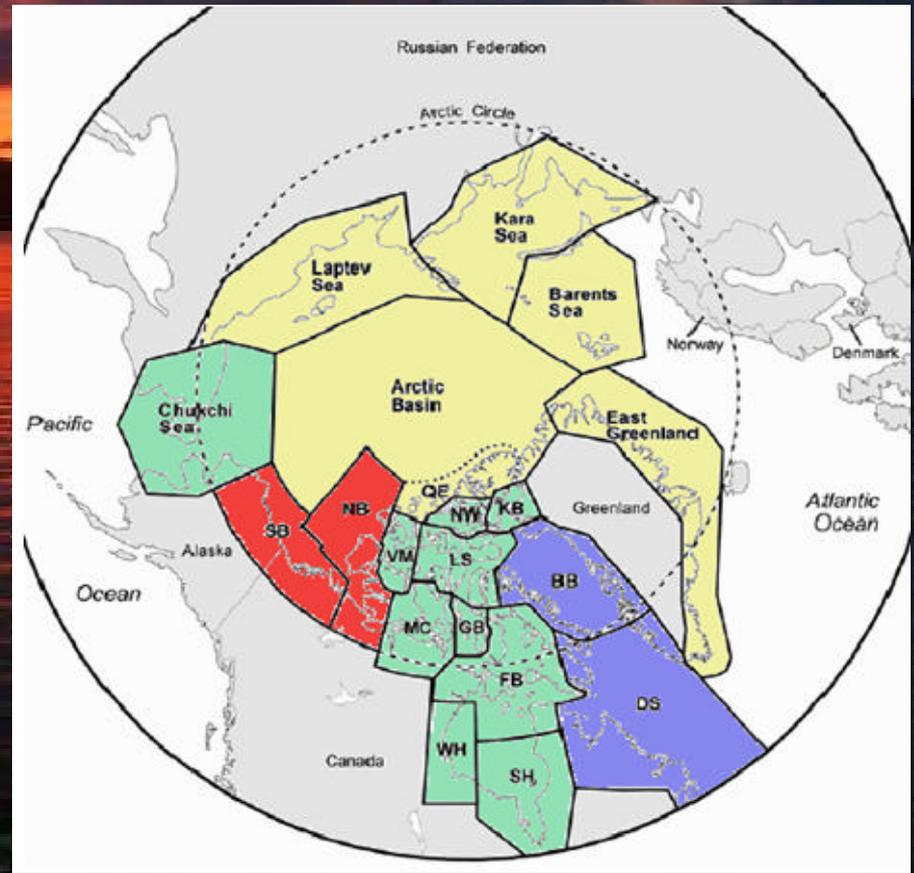


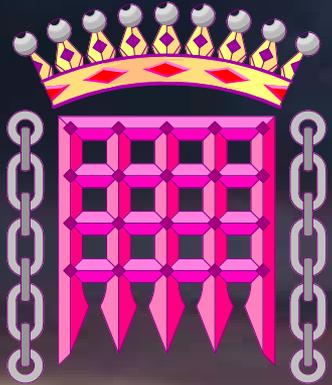


Rising, stable, and falling polar bear populations match temperature trends



Norris
et al.
(2002)





The bear facts

Evolved 200,000 BC

Delicacy: blaeberrries

Survived the last ice age

5,000 bears in 1940

25,000 bears in 2007

Hunting is the threat

Global warming is not



Norms
et al
(2002)



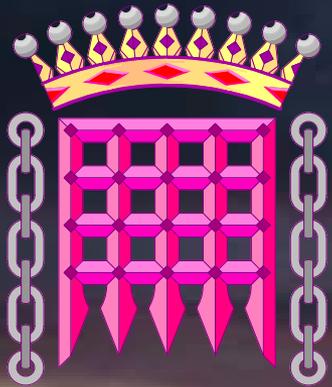
Bear- faced lie

**Al Gore says this
photo shows polar
bears stranded as the
last polar ice melts.**

**They were not
stranded, but were
just feet from shore.**

Norris
et al
(2002)





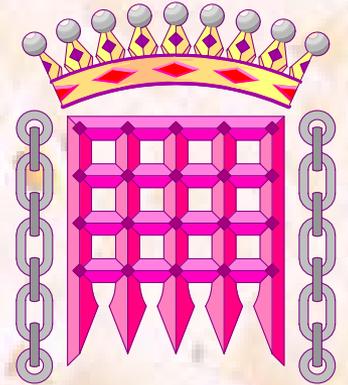
Polar bears: the verdict

“The only scientific study that either side before me can find ... indicates that four polar bears have recently been found drowned because of a storm. There may ... be drowning-related deaths of polar bears if the trend of regression of pack-ice or longer open water continues, but it plainly does not support Mr. Gore’s description.”





“Coral reefs all over the world because of global warming and other factors are bleaching ... All the fish species that depend on the coral reef are also in jeopardy as a result. Overall species loss is now occurring at a rate 1000 times greater than the natural background rate.”

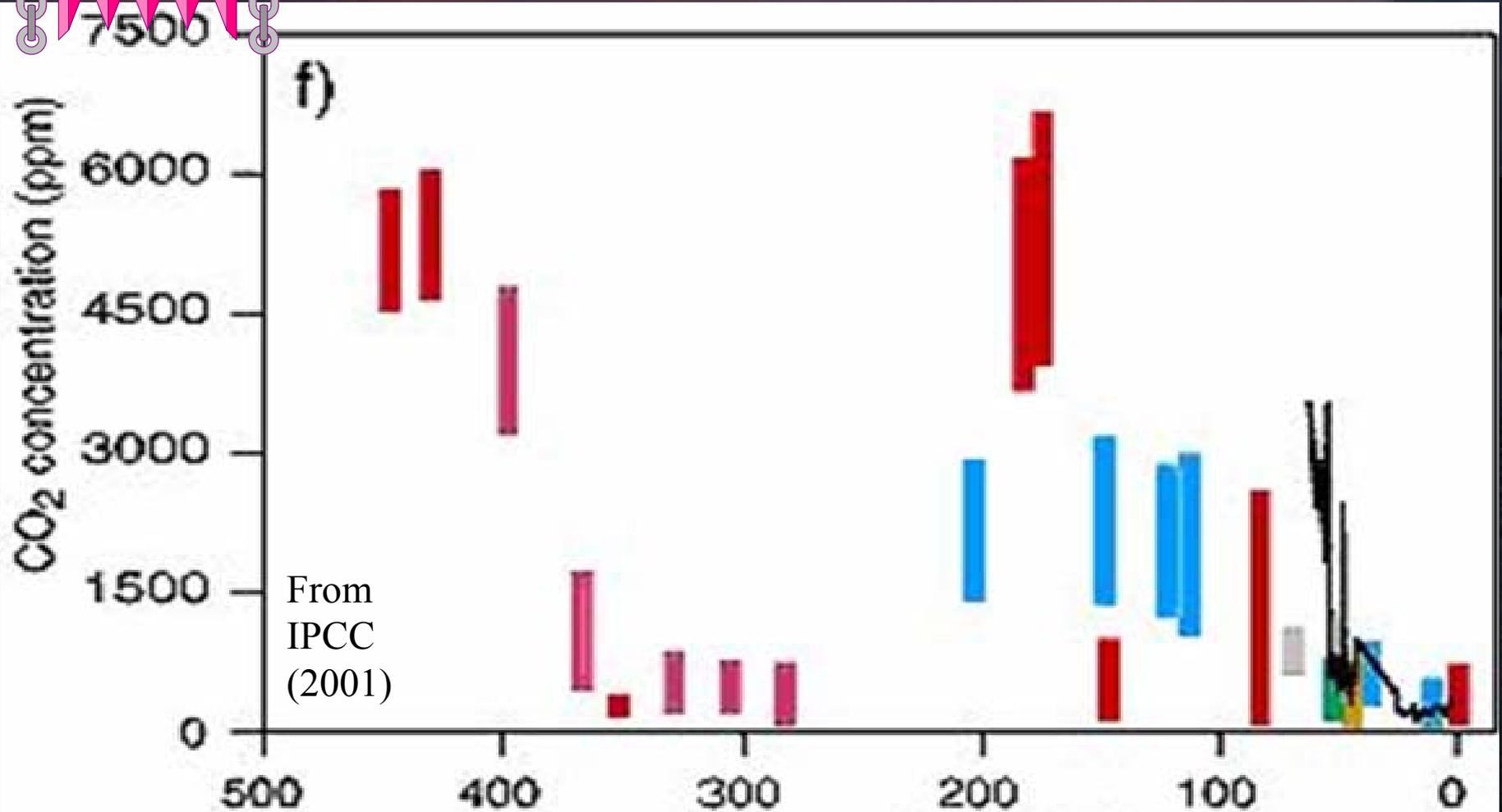


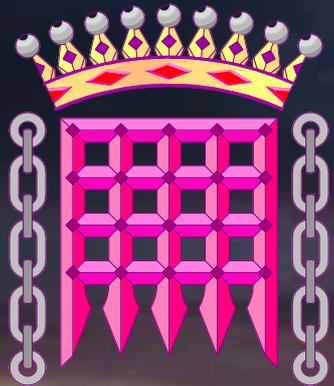
ERROR

17



Corals have survived CO₂ concentration at 6000 ppm

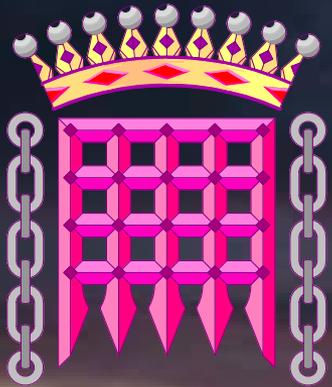




Reef grief: the verdict

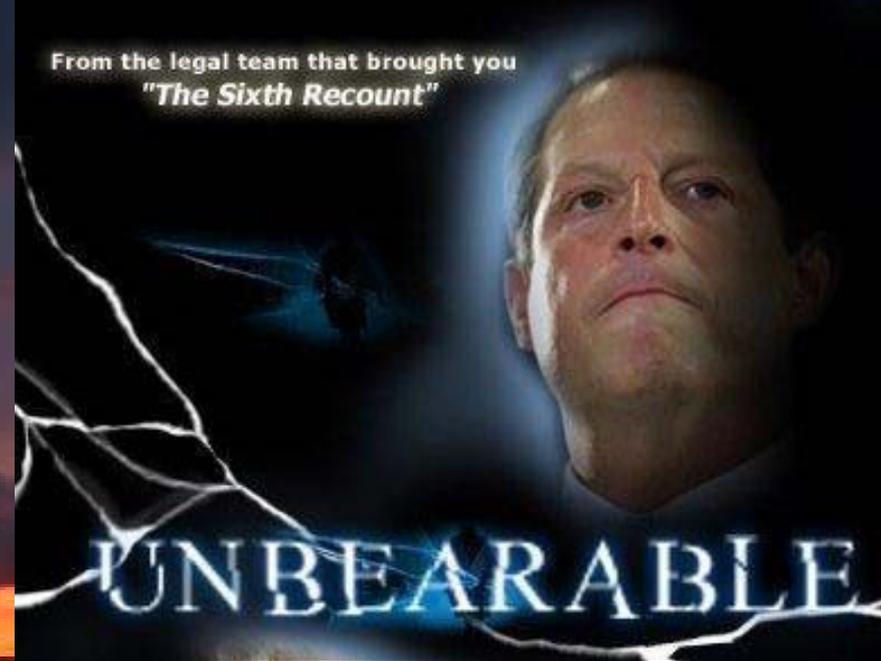
“The actual scientific view, as recorded in the IPCC report, is that, if the temperature were to rise by 1-3 degrees C, there would be increased coral bleaching and widespread coral mortality, unless corals could adapt or acclimatize, but that **separating the impacts of climate-change ... stresses from other stresses, such as over-fishing and polluting, is difficult.**”



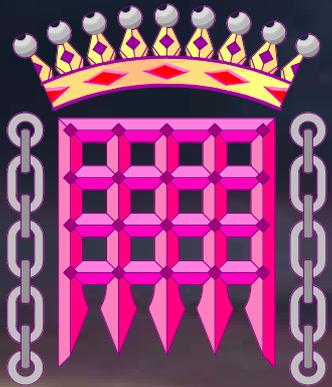


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From the legal team that brought you
"The Sixth Recount"



Now the Arctic ice cap acts like a giant mirror. All the sun's rays bounce off, more than 90 percent, to keep the earth cooler. But as it melts and the open ocean receives that sun's energy, instead more than 90 percent is absorbed."

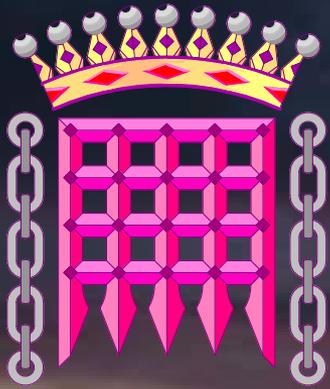


Elementary errors in understanding radiative transfer

Gore's diagram shows the sea turning cherry red as it absorbs the Sun's rays.

However, the sea emits all absorbed solar radiance instantly. The sea is heated by the atmosphere, not by solar radiance.

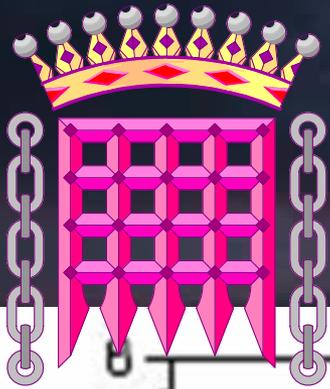
Also, Gore's diagram confuses the tropopause with the ionosphere.



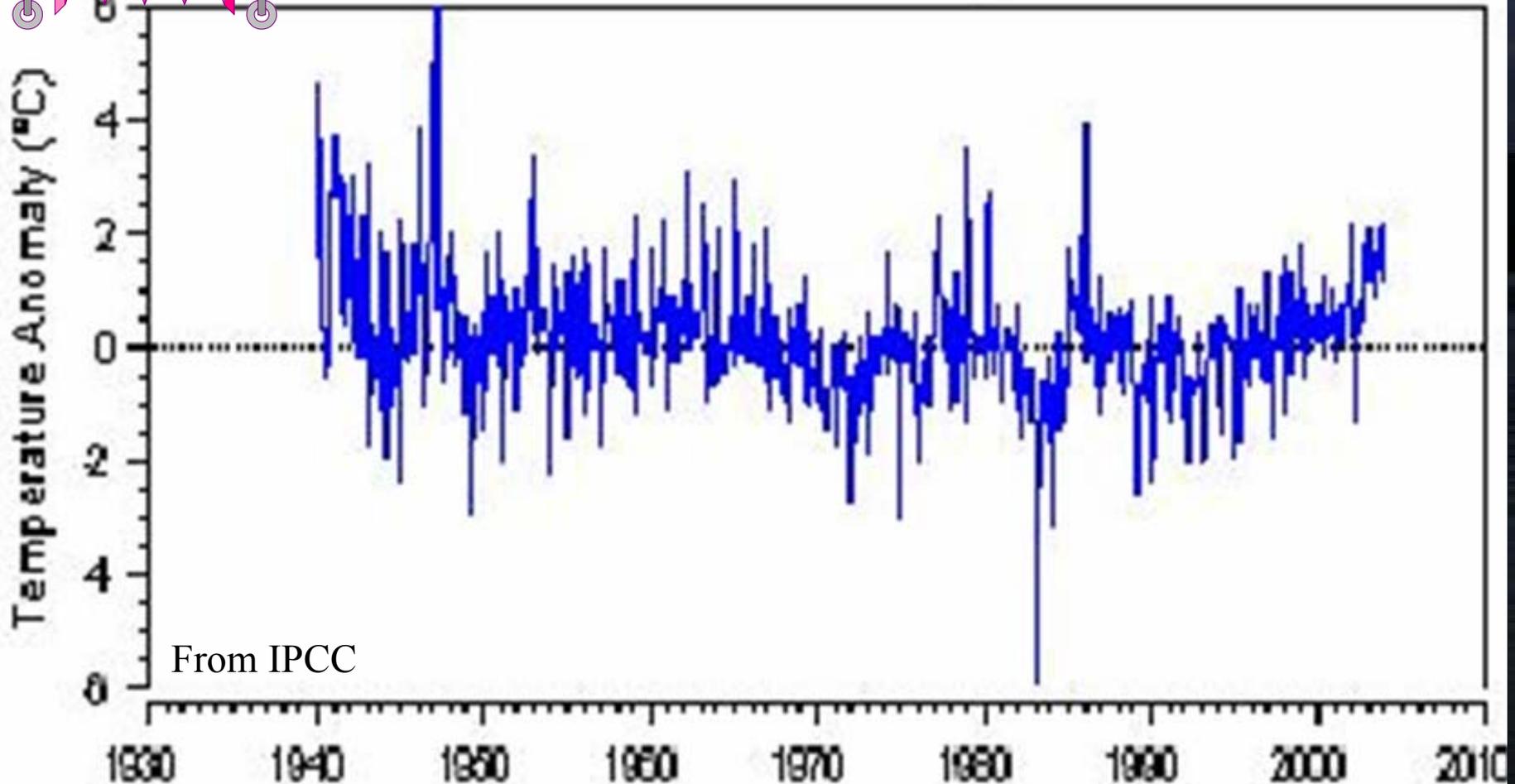
ERROR 19

“So there is a faster buildup of heat here at the North Pole in the Arctic Ocean and the Arctic generally than any where else on the planet.”

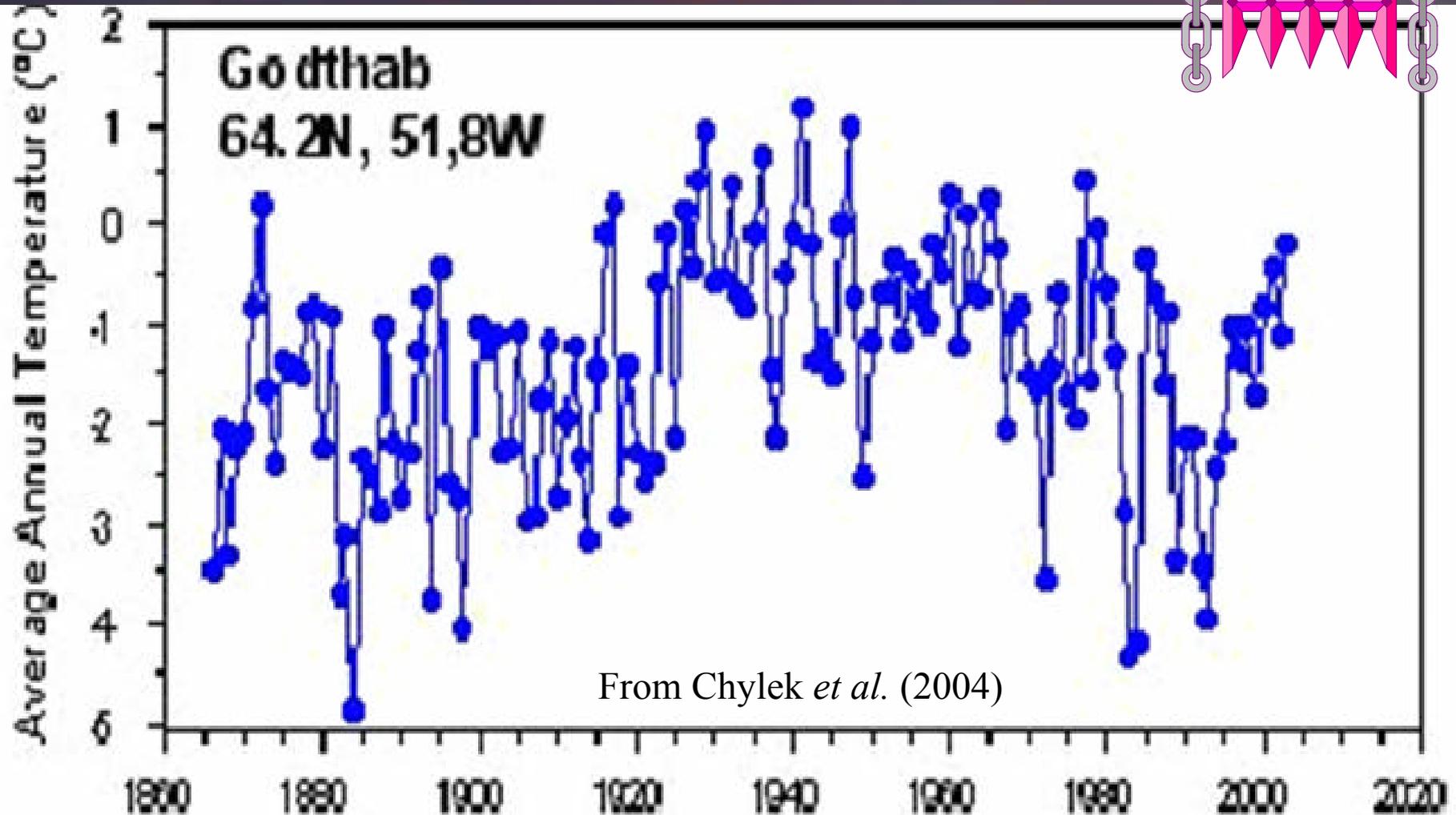
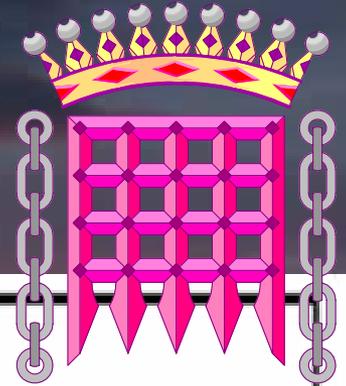




The Arctic was warmer in the 1940s than today



Arctic temperature is now 1 °C below 1940

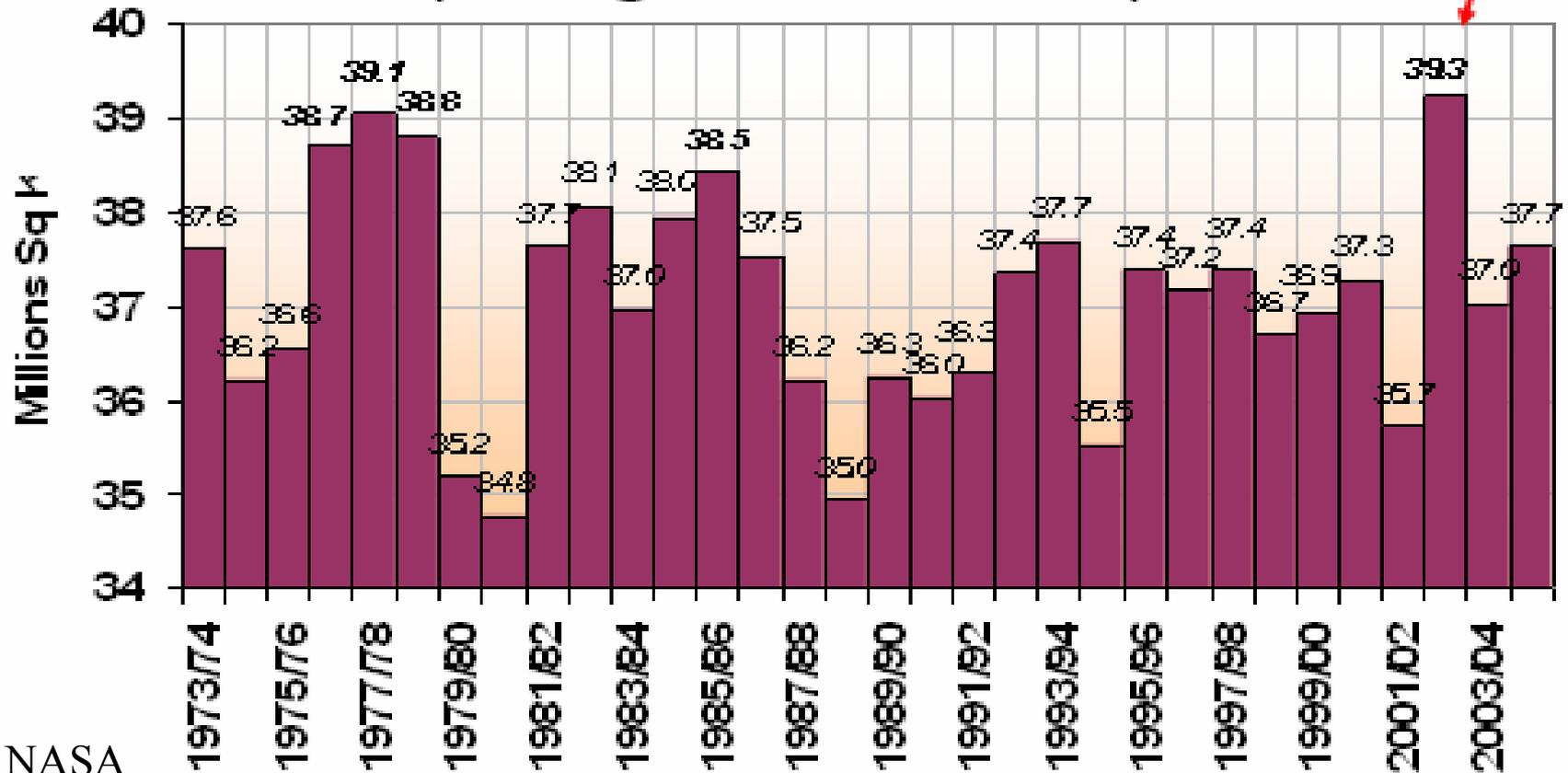




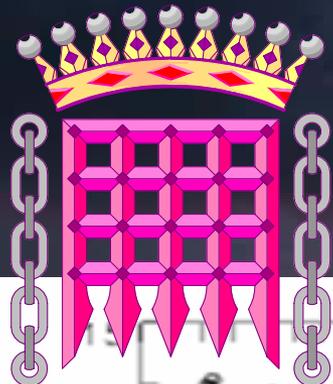
Record snow cover, 2001

Northern Hemisphere Snowcover (Average October-March)

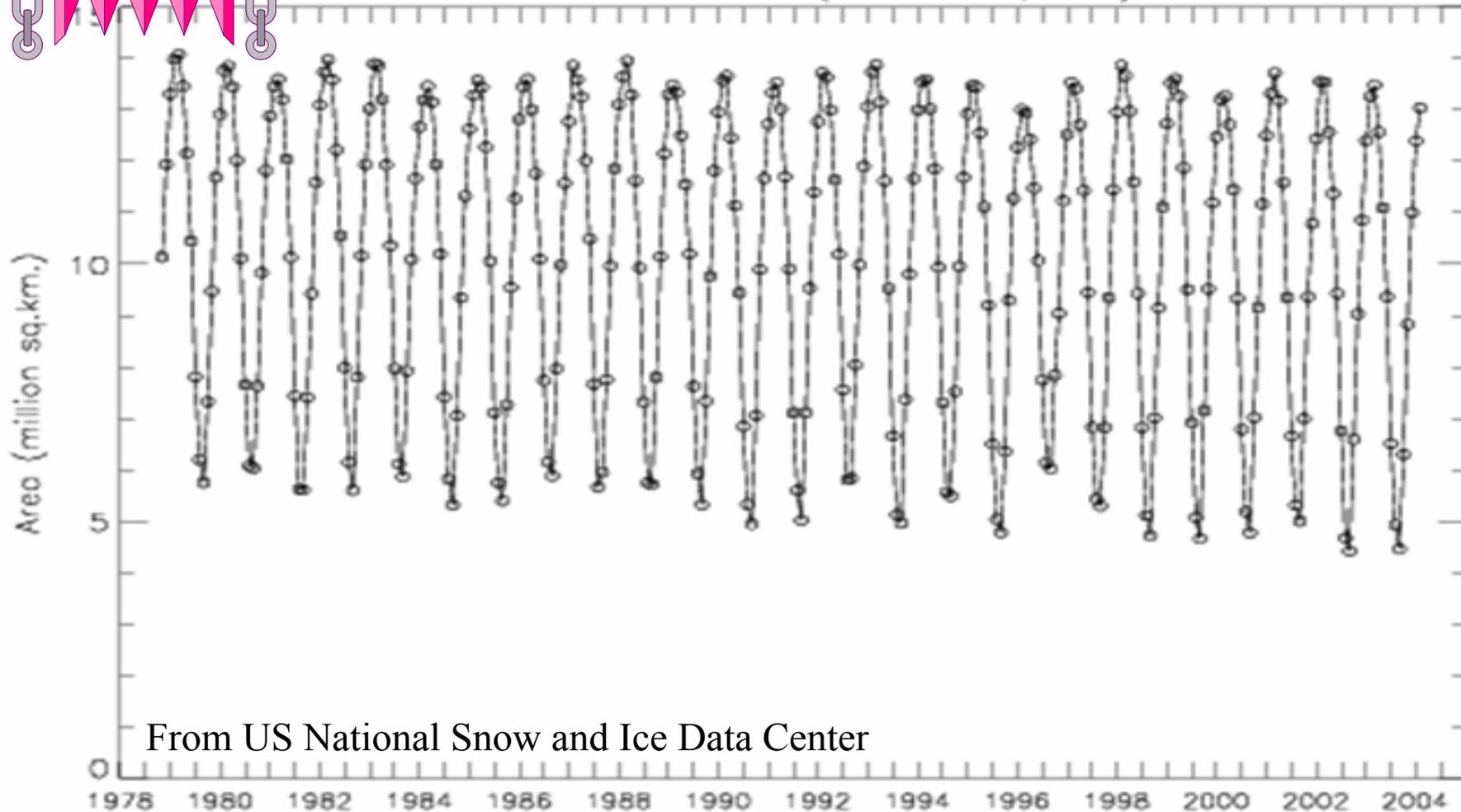
New Record



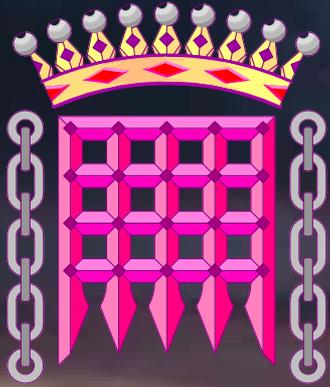
Very little decline in Arctic sea ice extent



Total Arctic Area (million sq.km.)



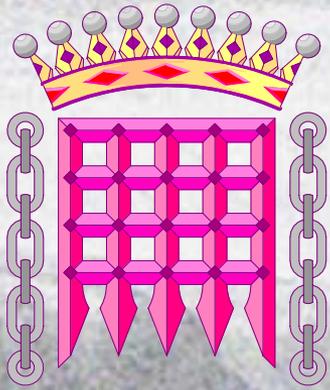
From US National Snow and Ice Data Center



Icebound vessels in the Arctic, April 2007



Was this reported in your newspaper?

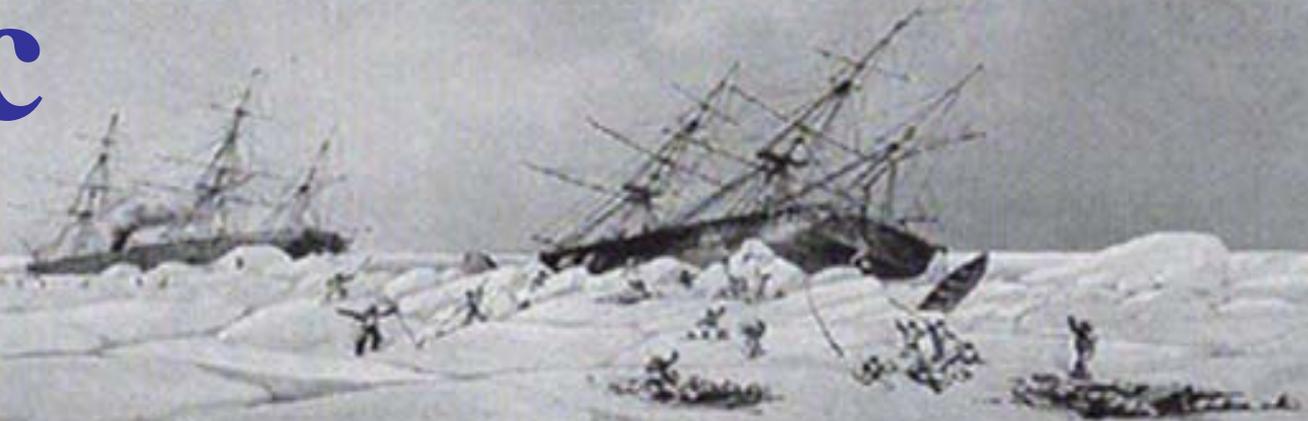


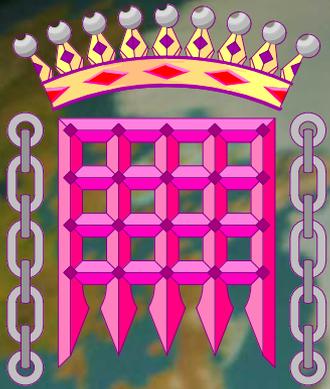
Beechey Is., 5 Sep 1850



**The
variable
Arctic**

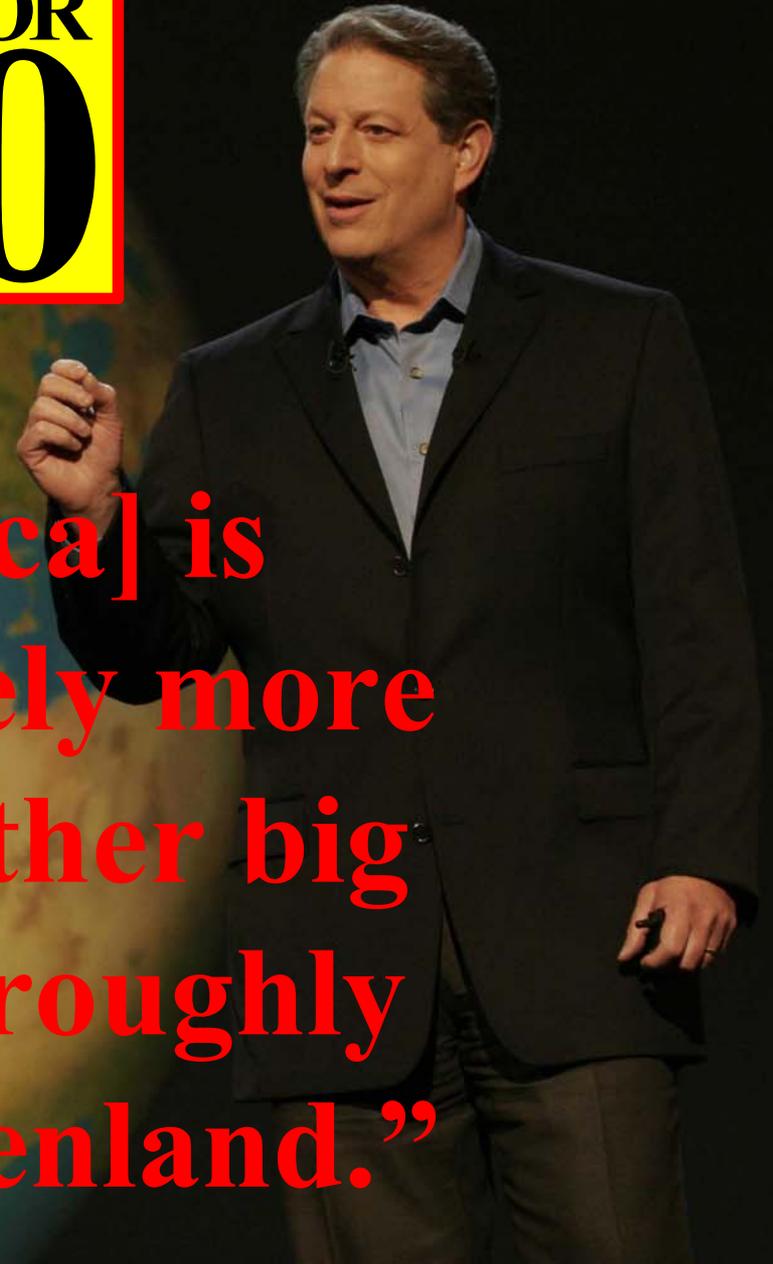
Beechey Is., 21 Aug 1853

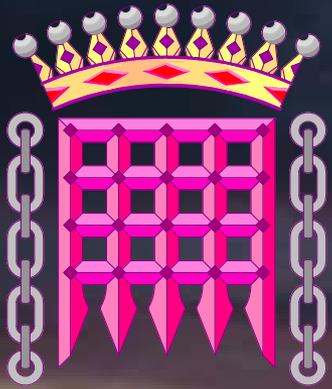




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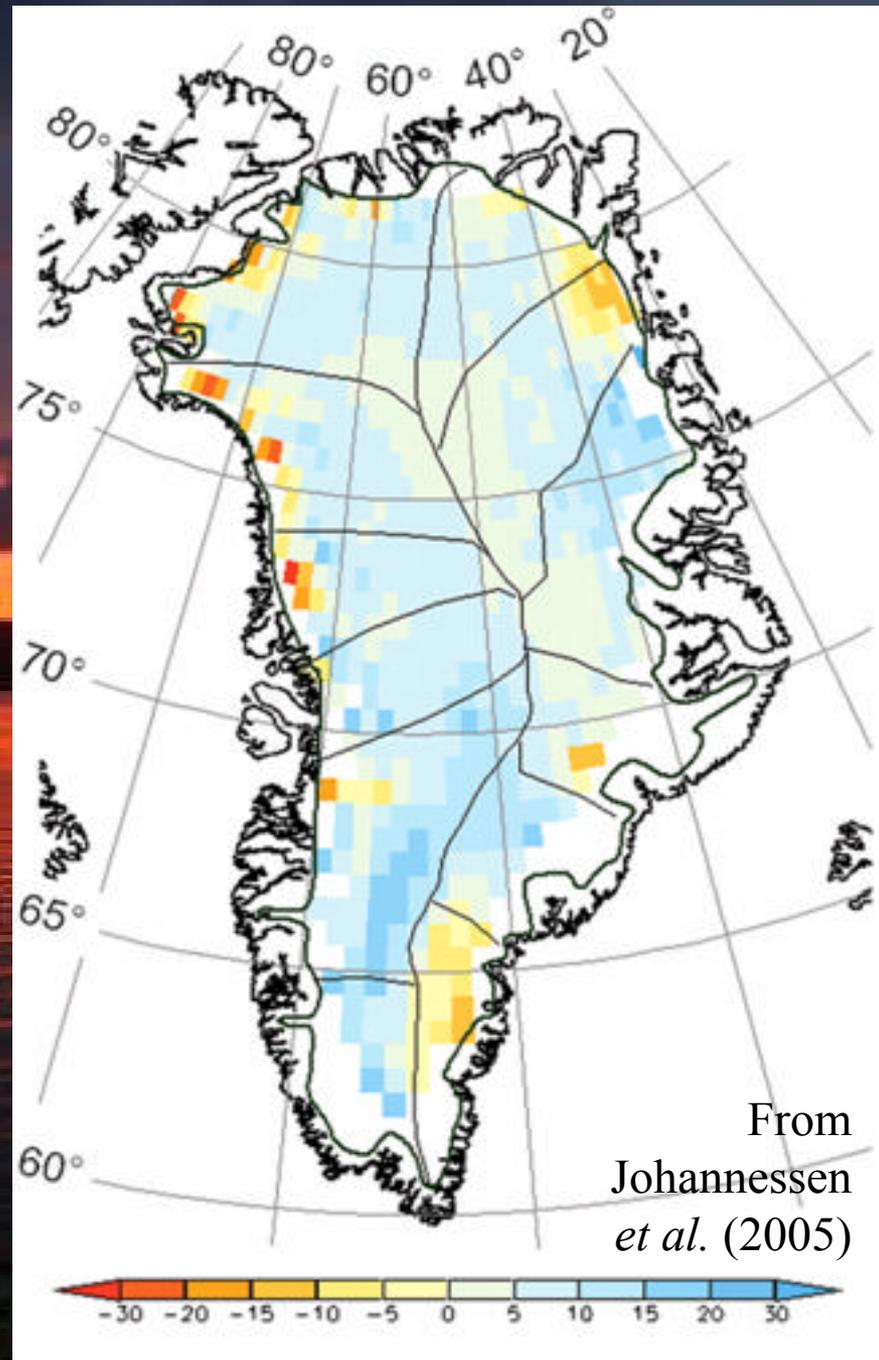
“It [West Antarctica] is considered relatively more stable ... than another big body of ice that is roughly the same size. Greenland.”

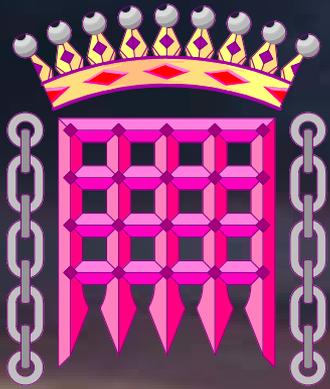




Greenland ice grows 2in a year

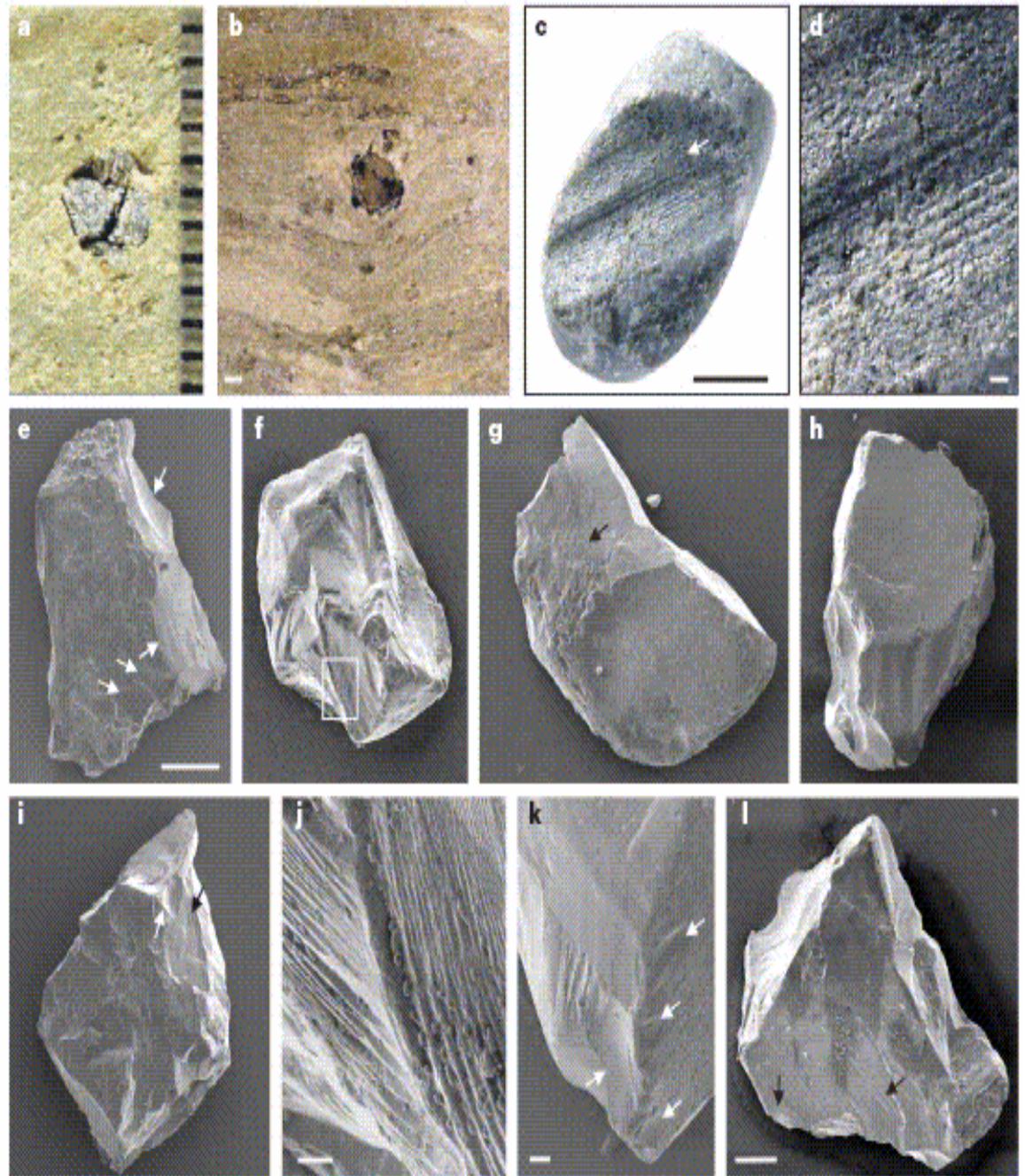
“Colours indicate ice-sheet elevation change rate in cm/year ... from ... satellite altimeter data, 1992-2003. The spatially averaged increase is 5.4 ± 0.2 cm/year.”



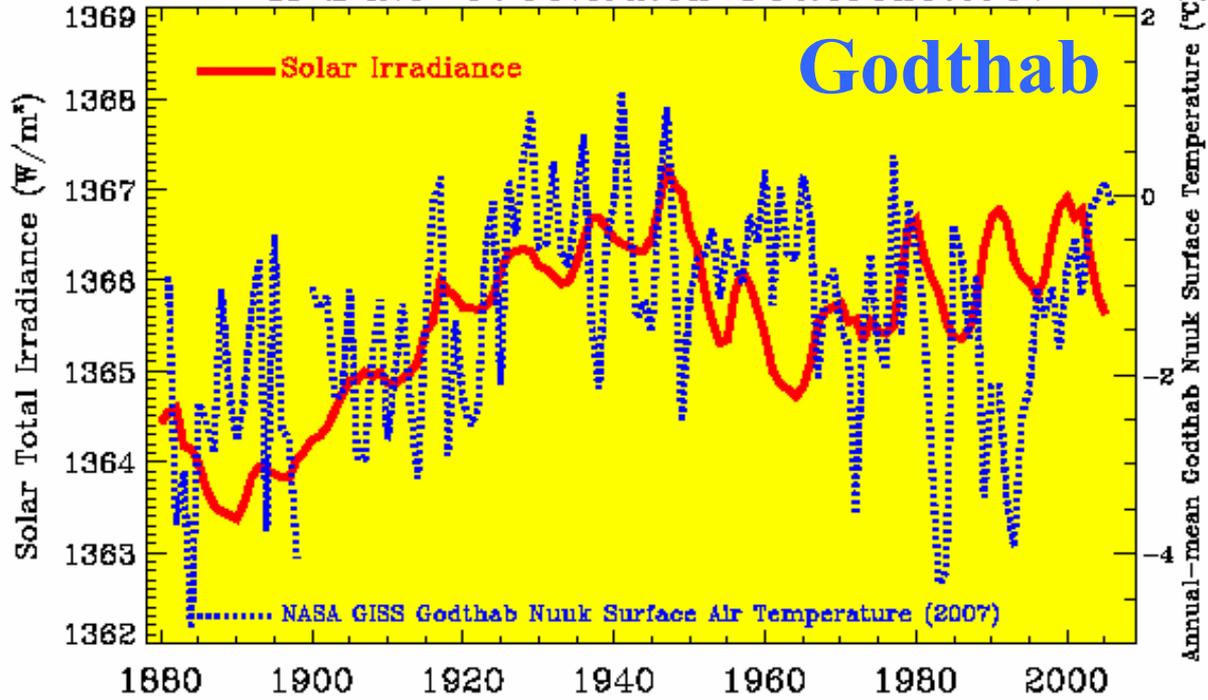


**Greenland
was glaciated
when CO₂
was 400 to
1000 ppmv**

**From Eldrett
et al. (2007)**

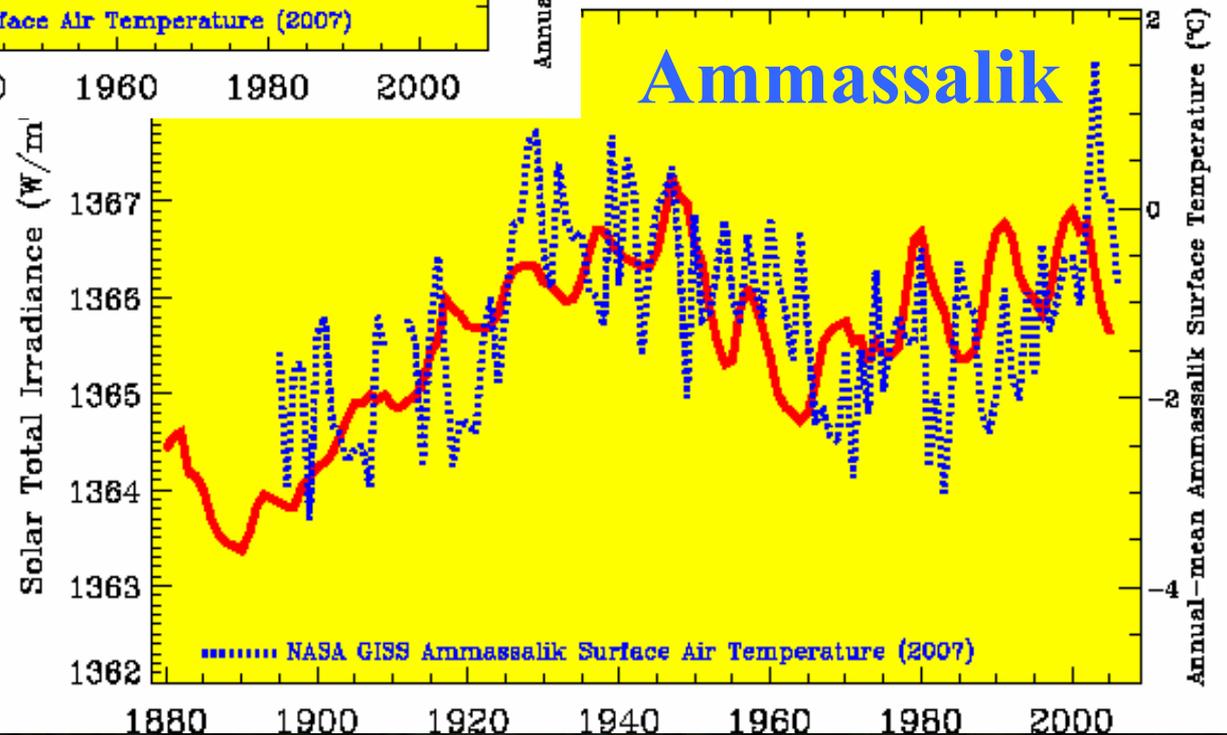


A Sun-Greenland Coincidence?

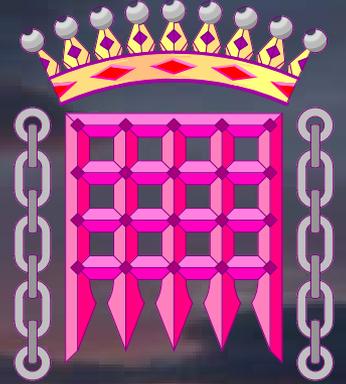


From Soon (2007)

The Sun,
not CO₂,
warms
Greenland

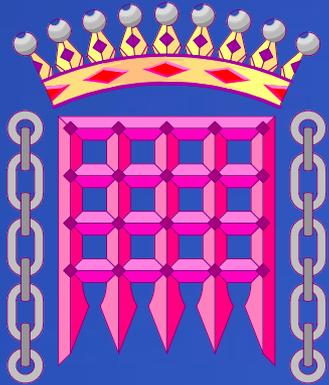


**Official: Greenland will
not melt anytime soon**



**To melt half the Greenland ice
sheet, and raise sea level by 3
meters, would require additional
“sustained” warmth of 5.5°C
“over 1000 years.”**

IPCC (2001)

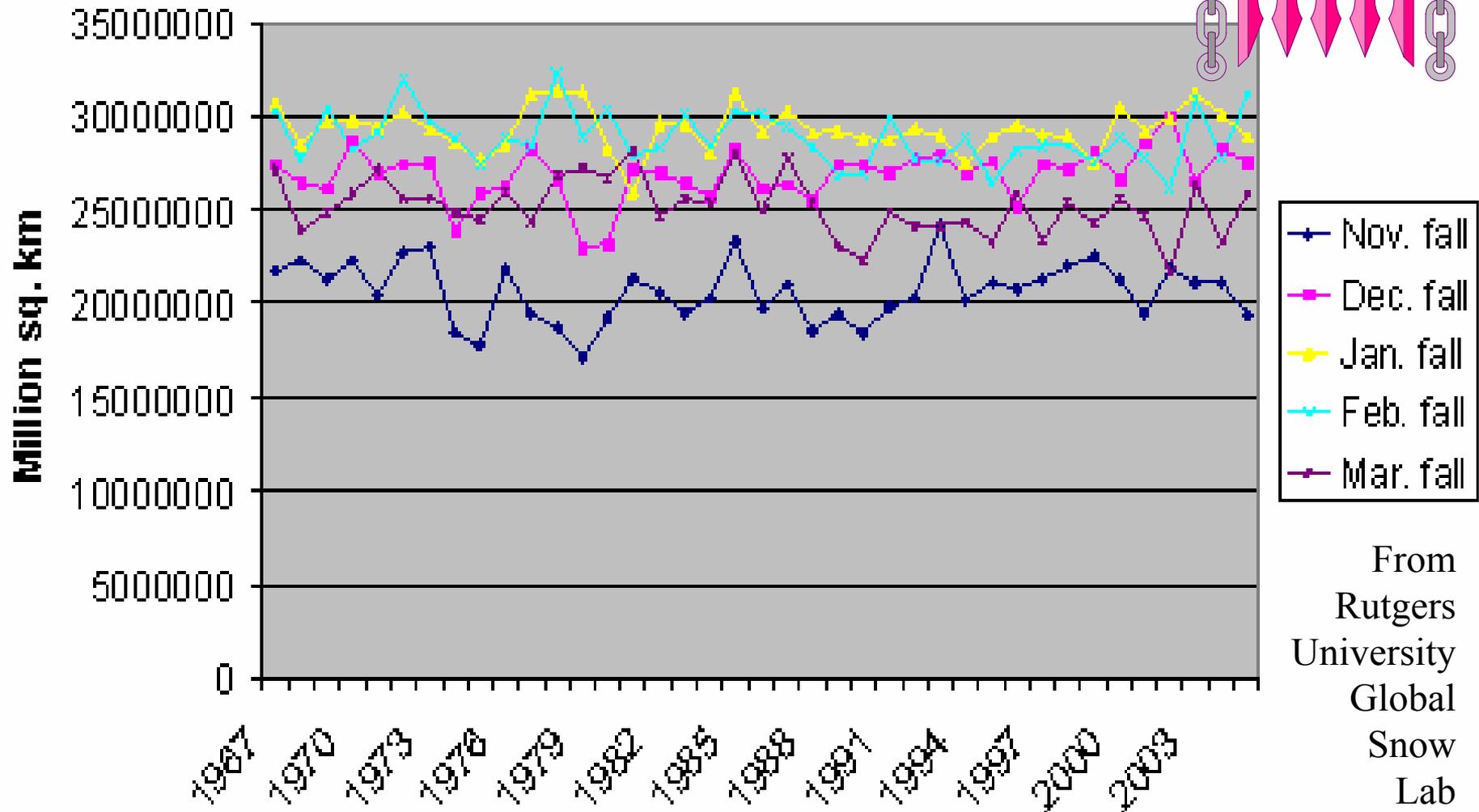
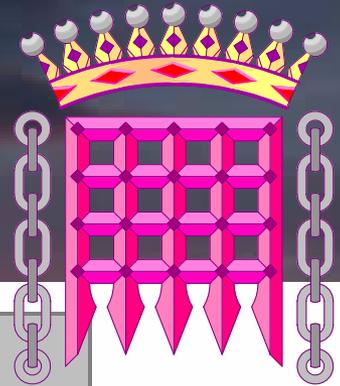


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21**

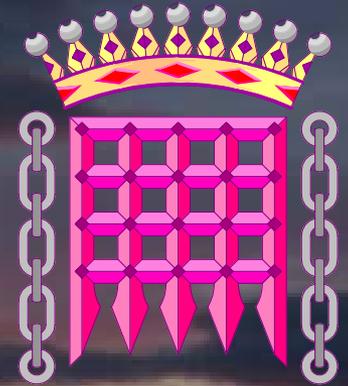
“In the Himalayas there is a particular problem because more than 40% of all the people in the world get their drinking water from rivers and spring systems that are fed more than half by the melt water coming off the glaciers. Within this next half century those 40% of the people on earth are going to face a very serious shortage because of this melting.”



No decline in Eurasian snow cover, Nov - Mar



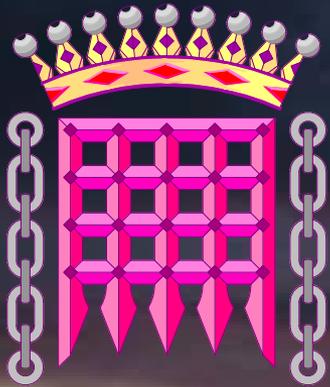
From
Rutgers
University
Global
Snow
Lab



“It’s also true in South America. This is Peru 15 years ago and the same glacier today.”

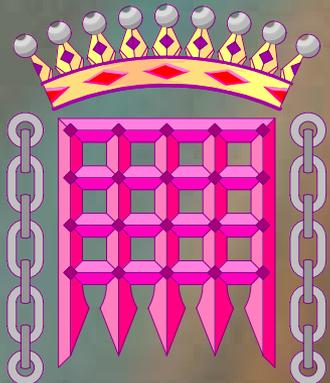
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22**





“During most of the past 10,000 years, glaciers were absent from all but the highest peaks in the Cordillera de Merida.”

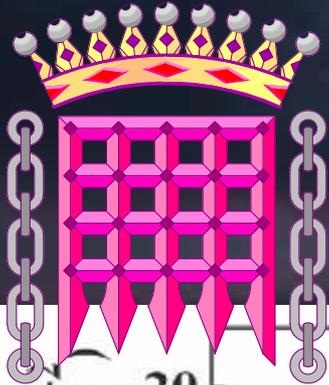
Polissar et al. (2006)



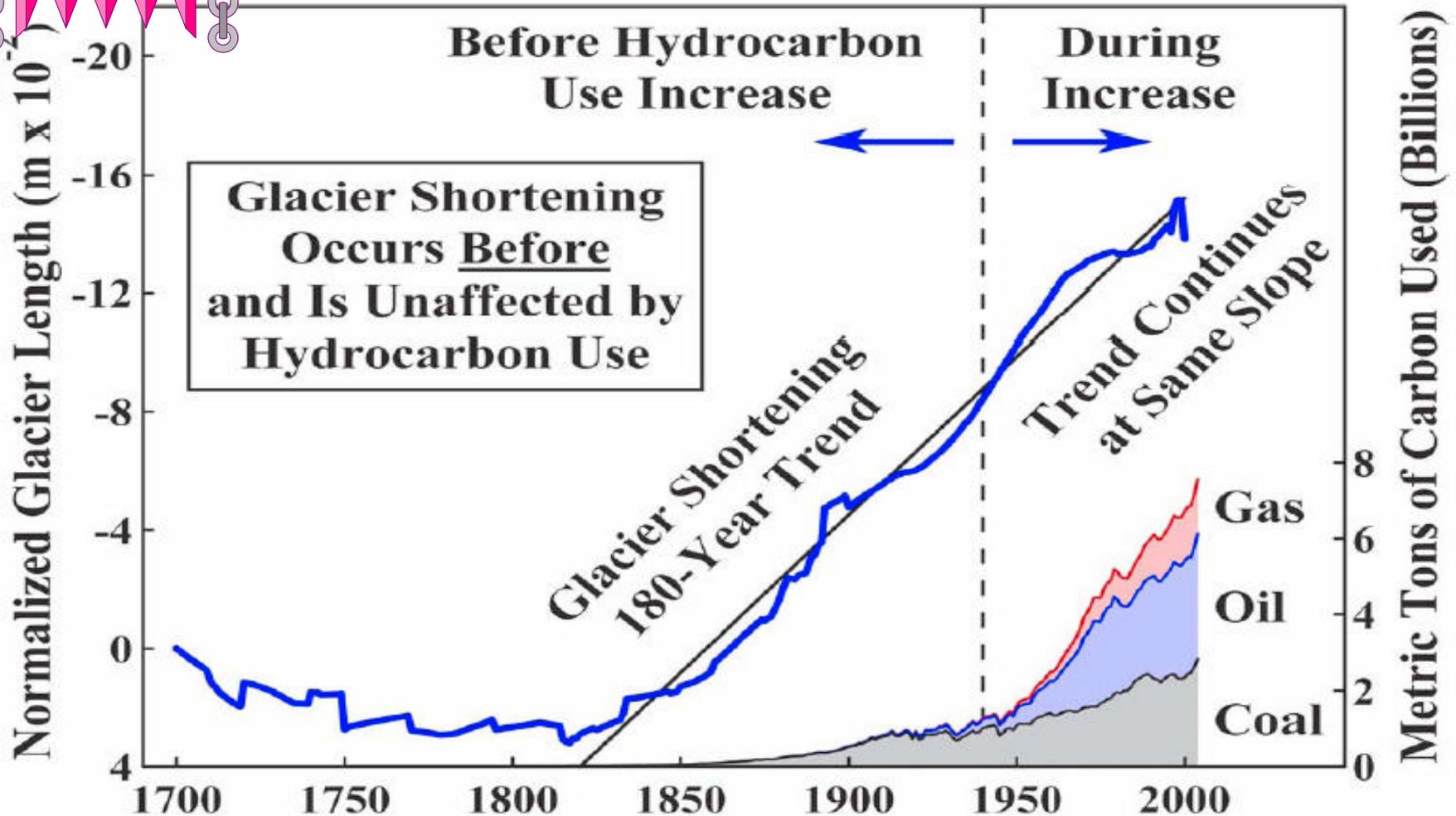
“The ice has a story to tell. And it is worldwide.”

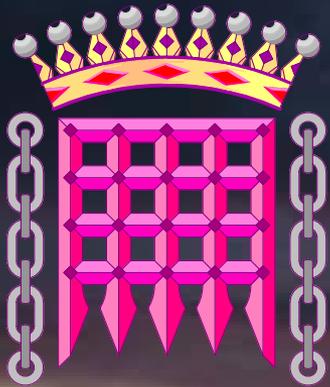
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Glacier recessions began in 1800



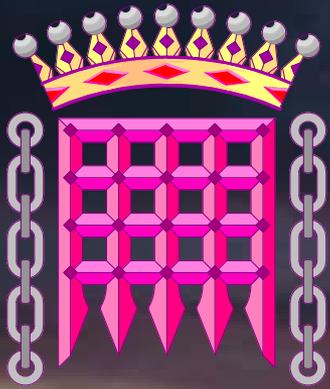


The Abrekke Glacier, Jotunheim, well before manmade warming

1869

1946





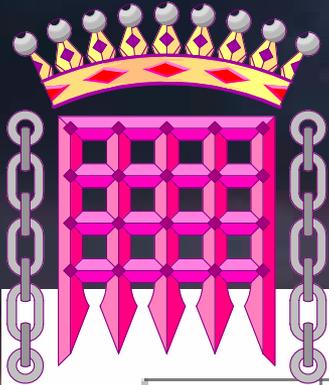
The Argentiere Glacier, French Alps, before manmade warming

1850

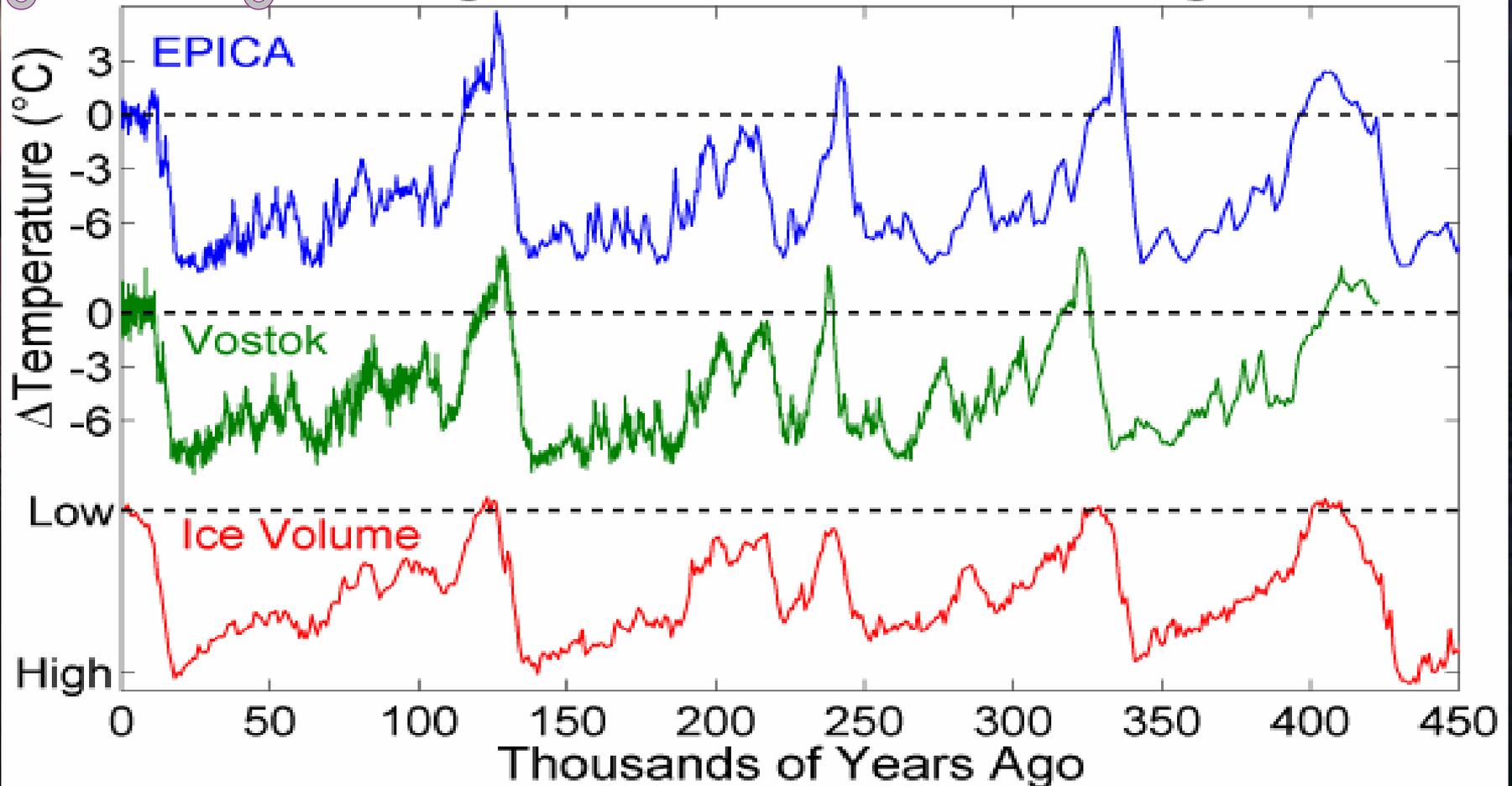
1966

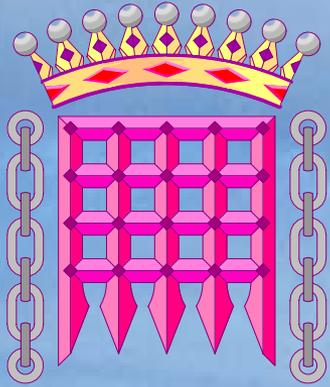


Little risk of ice-melt



Ice Age Temperature Changes

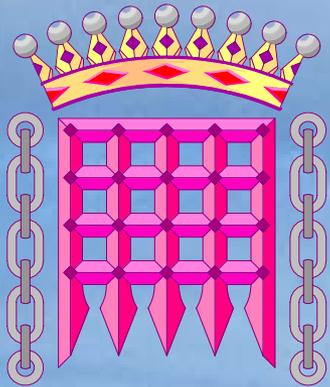




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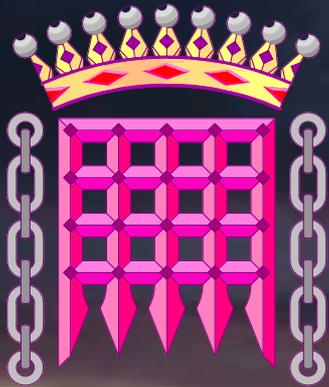
**“I want to focus on
West Antarctica ... They’ve
measured disturbing
changes on the underside of
this ice sheet.”**



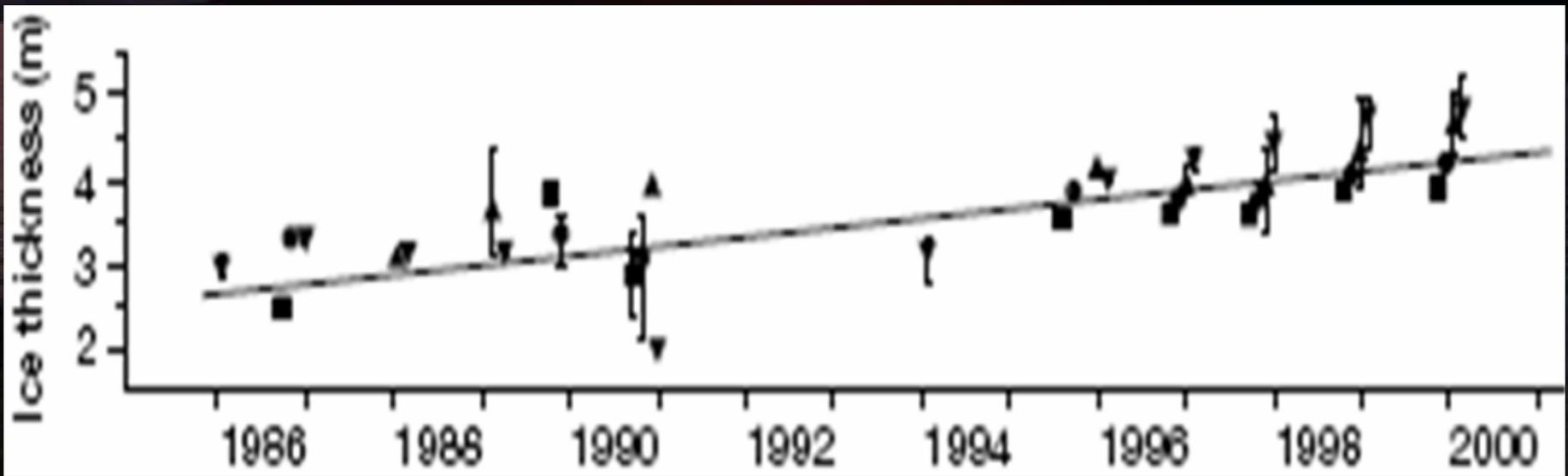
West Antarctica will take 7000 years to melt

“Most recession [of the West Antarctic Ice Sheet] occurred in the middle to late Holocene in the absence of substantial sea level or climate forcing ... [At the rate seen in the 1990s], complete deglaciation will take about 7,000 years.”

Conway et al. (1999)

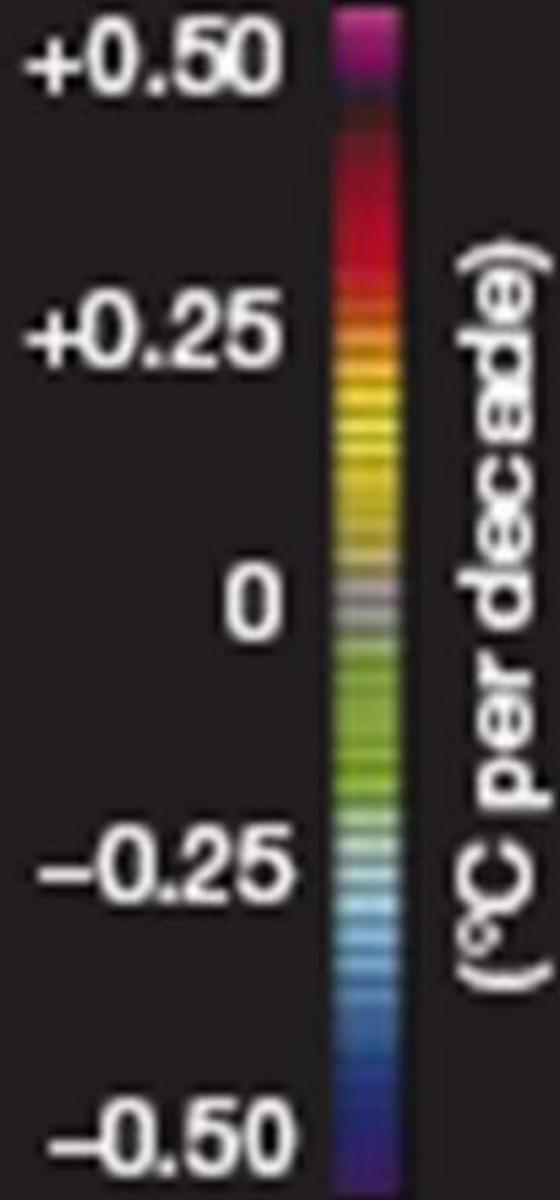
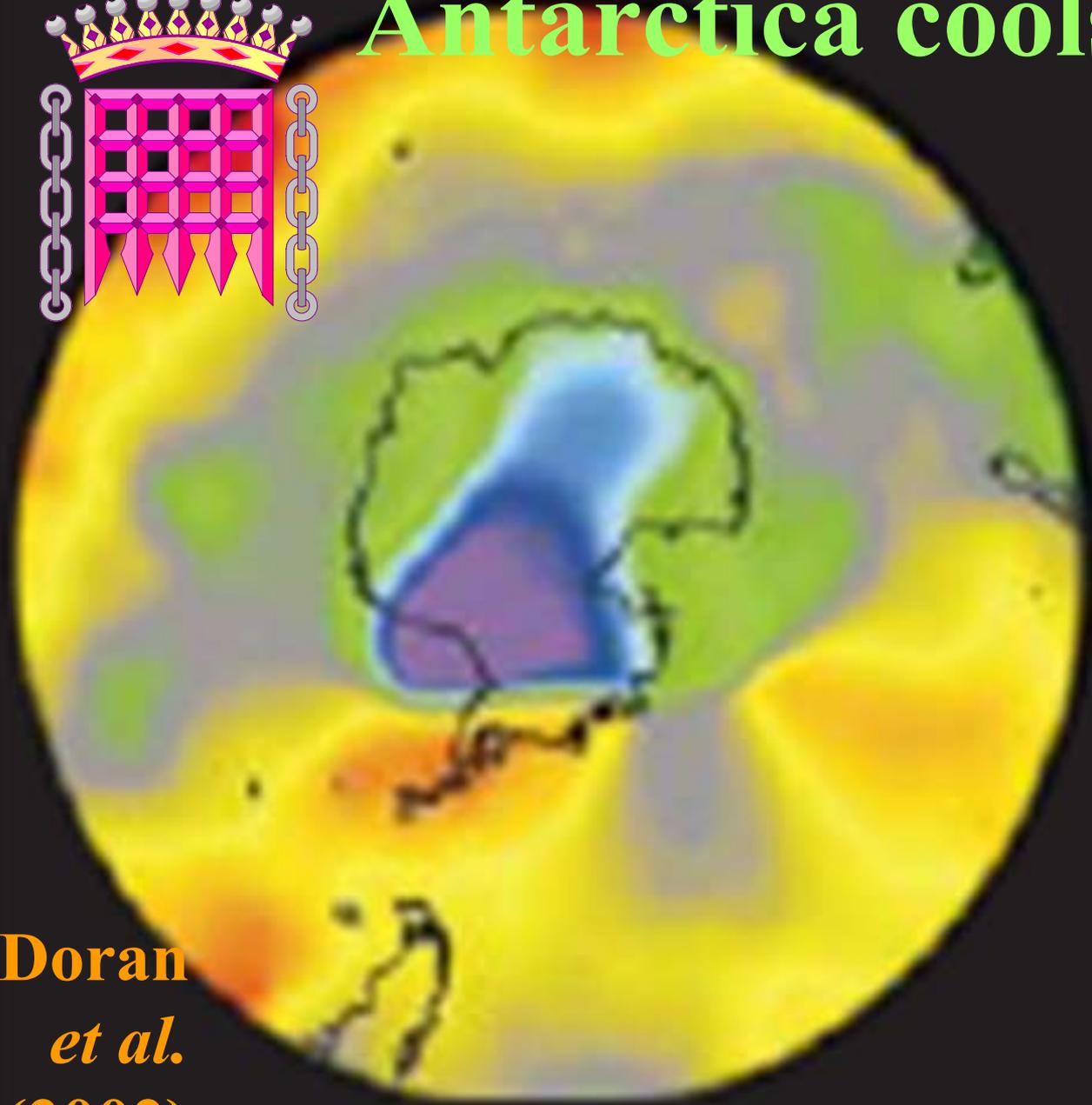
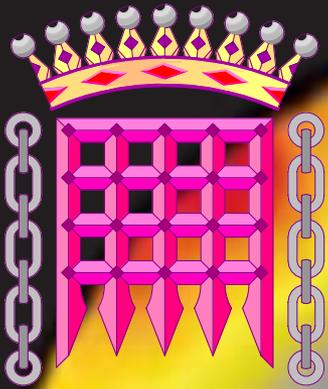


Antarctica: the plot - and the ice - thickens



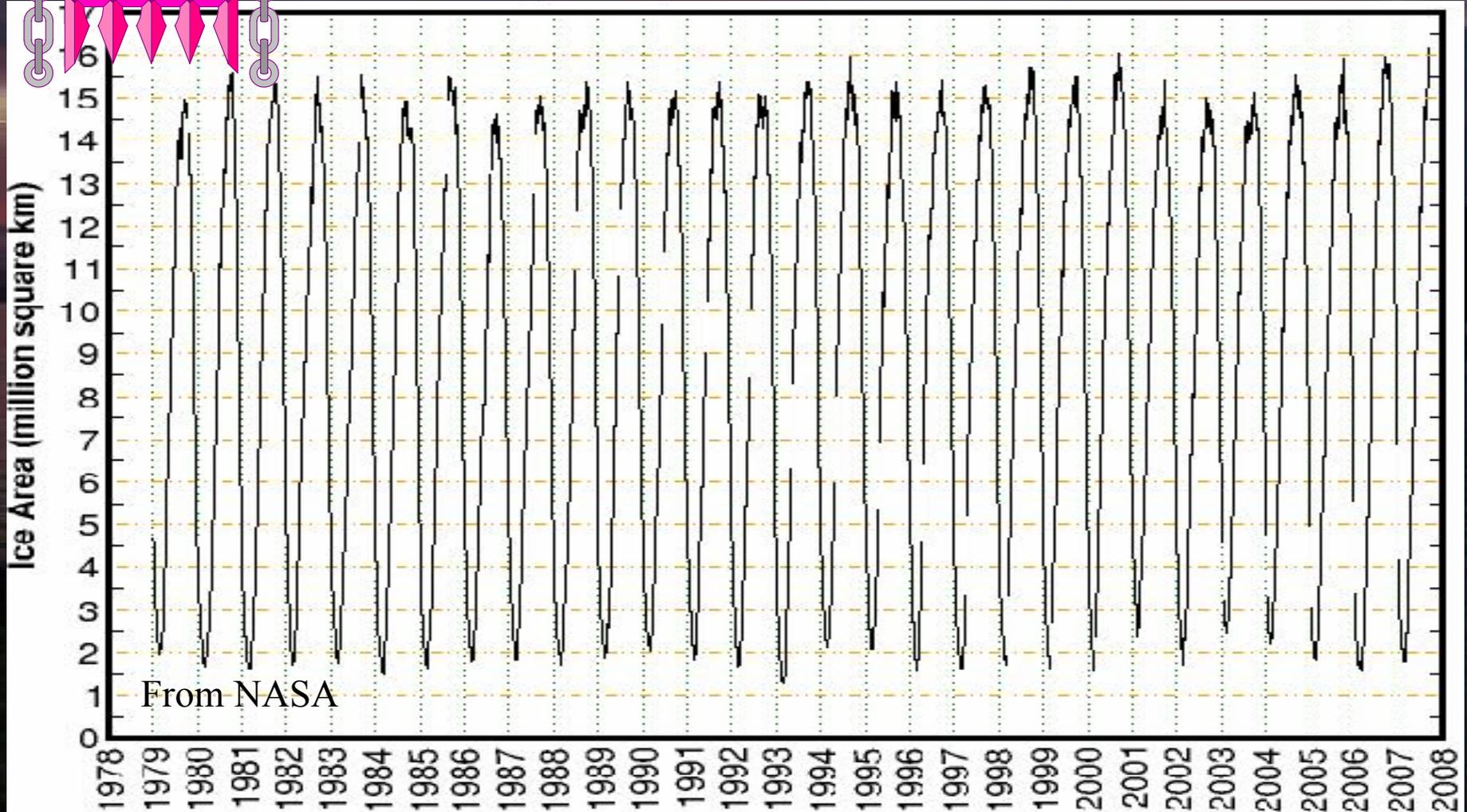
Doran *et al.* (2002)

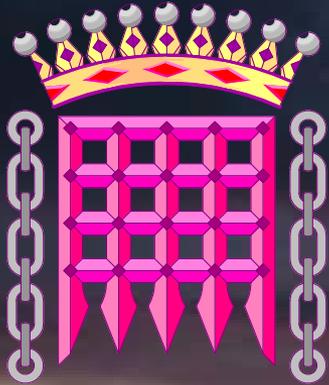
Antarctica cools



Doran
et al.
(2002)

The Antarctic sea ice is now at a record extent





“Every place... is an ice shelf larger than the state of Rhode Island that has broken up in just the last 15 to 20 years.”

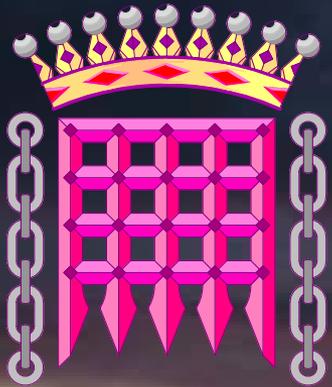


ANTARCTICA

Area of detail

ERROR
25





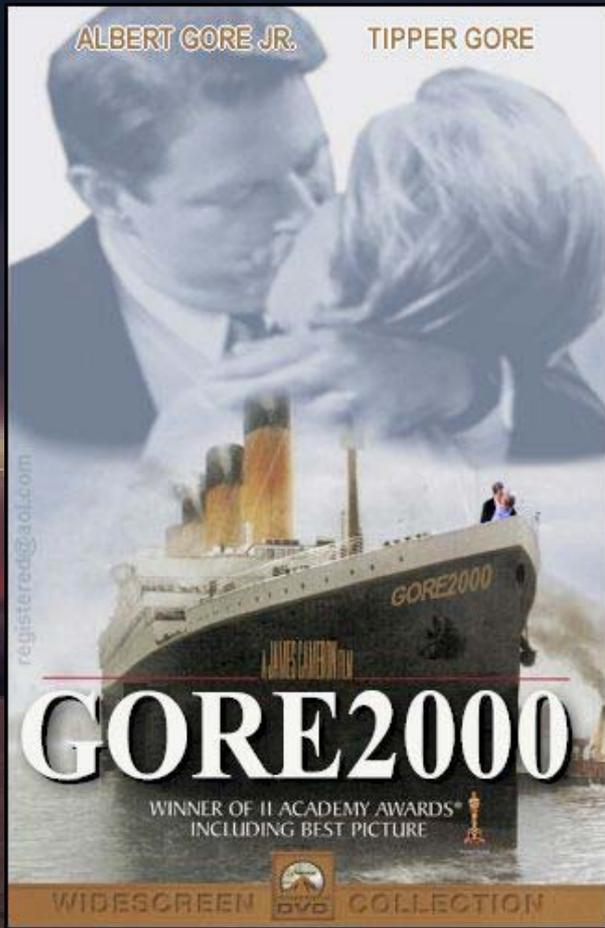
Antarctic Peninsula: the unexciting facts

The Peninsula is just 2% of the continent.

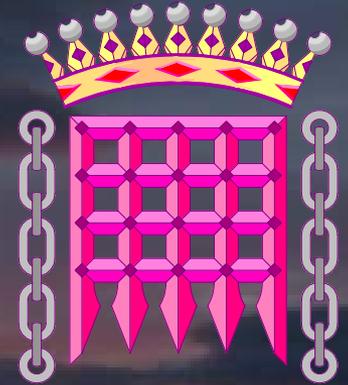
All 7 melted shelves total 1/55 of Texas.

The ice shelves have melted before.

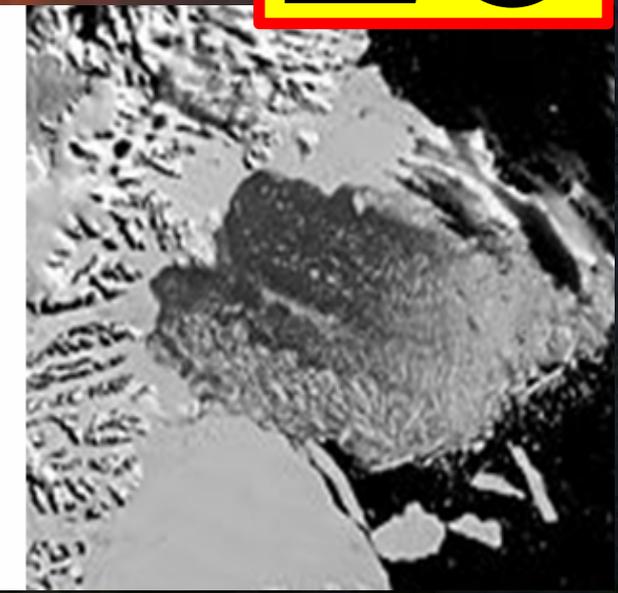
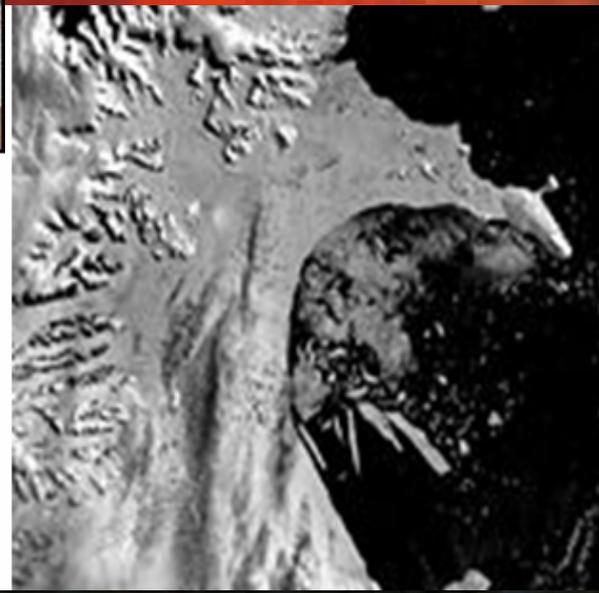
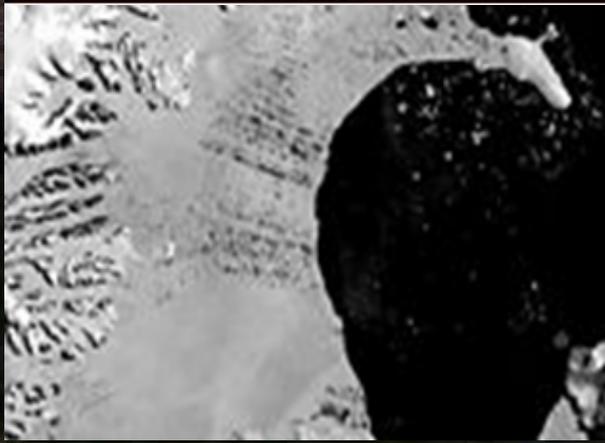
Antarctic land and sea ice are growing.



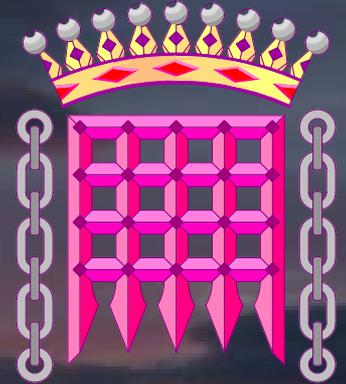
“I want to focus on ... Larsen B ... In a period of 35 days, this ice shelf completely disappeared.”



ERROR
26

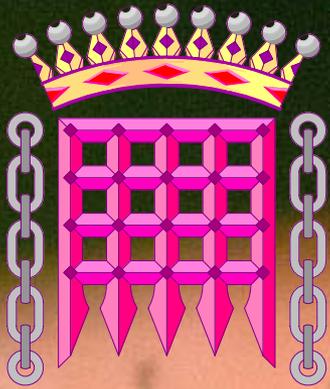


Larsen B has gone missing before



Study of benthic foraminifera indicates "widespread ice shelf breakup in the mid-Holocene ... The maximum ice-shelf limit may date only from the Little Ice Age."

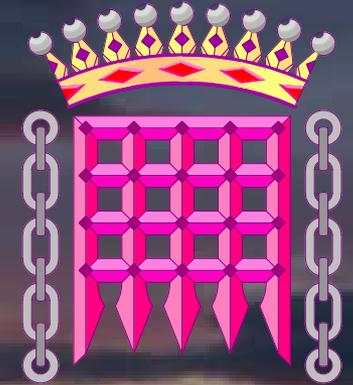
Pudsey & Evans (2001, 2006)



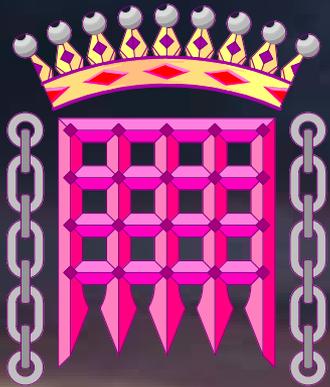
ERROR
27

“There are cities that were founded because they were just above the mosquito line. Nairobi is one ... Now the mosquitoes, with warming, are climbing to higher altitudes.”

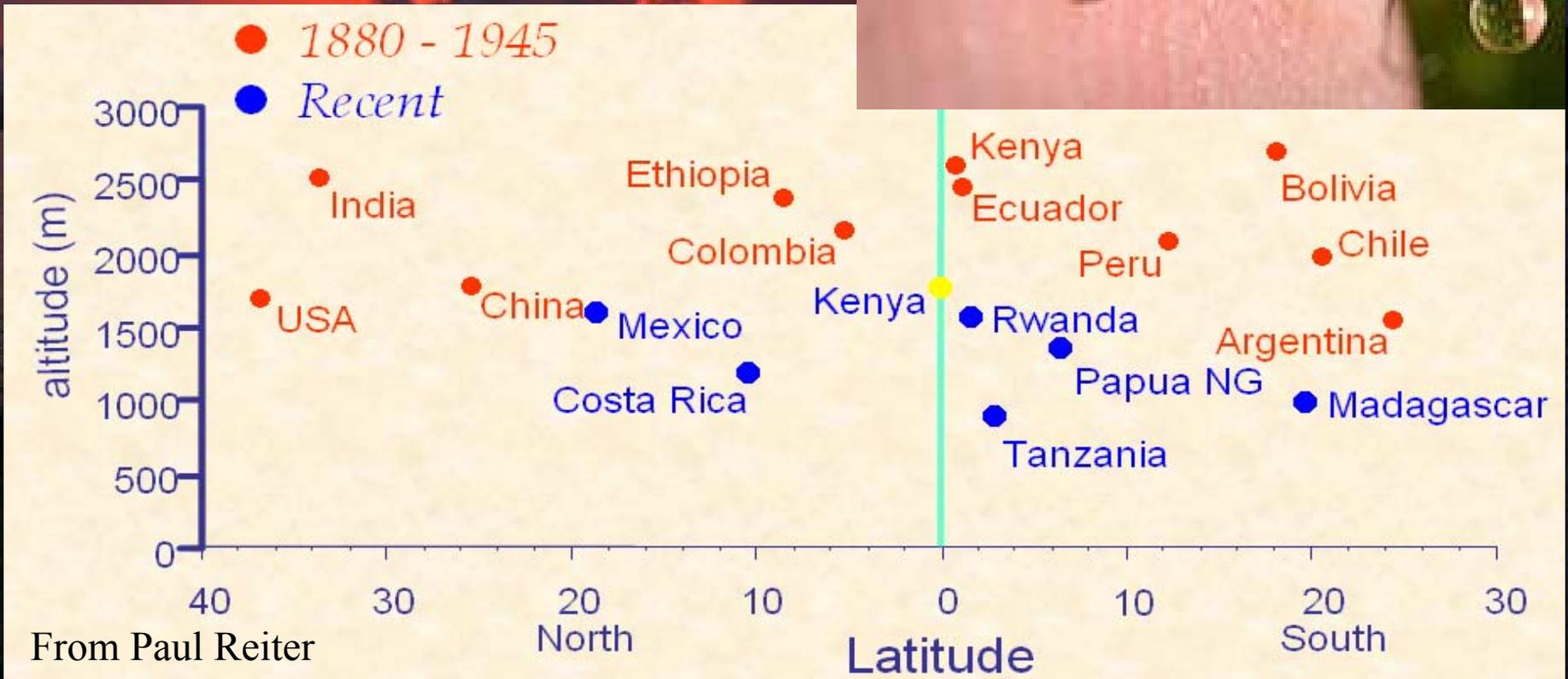




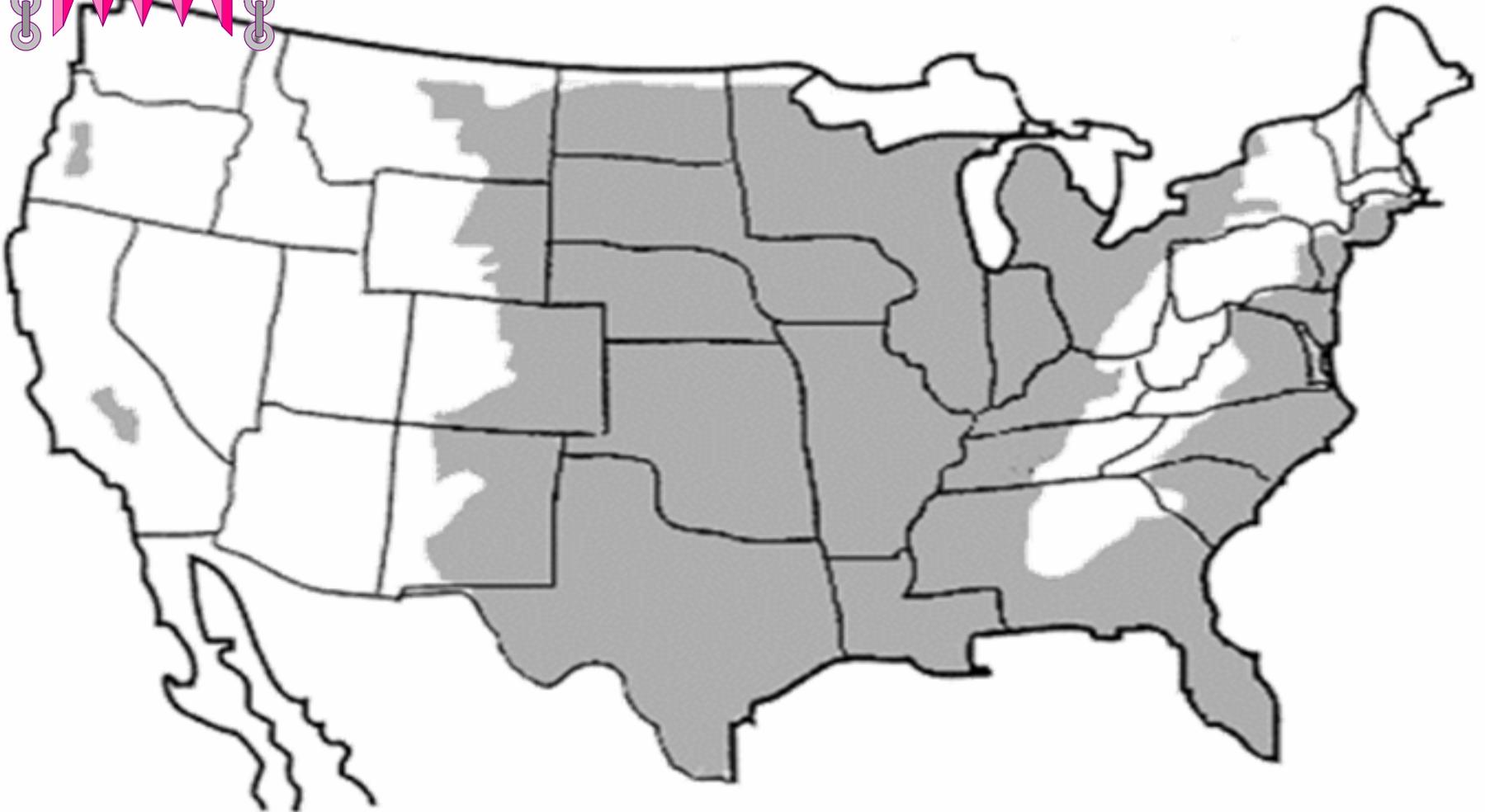
**At least ten
malaria
outbreaks
in Nairobi
since its
foundation
Paul Reiter**

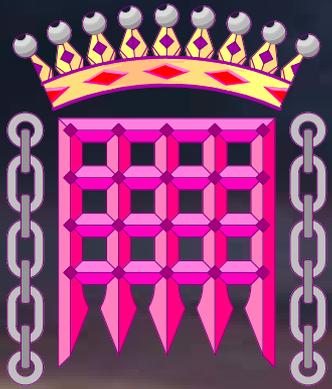


Malaria has moved lower



The malarial US, 1882 (no malaria by 1949)



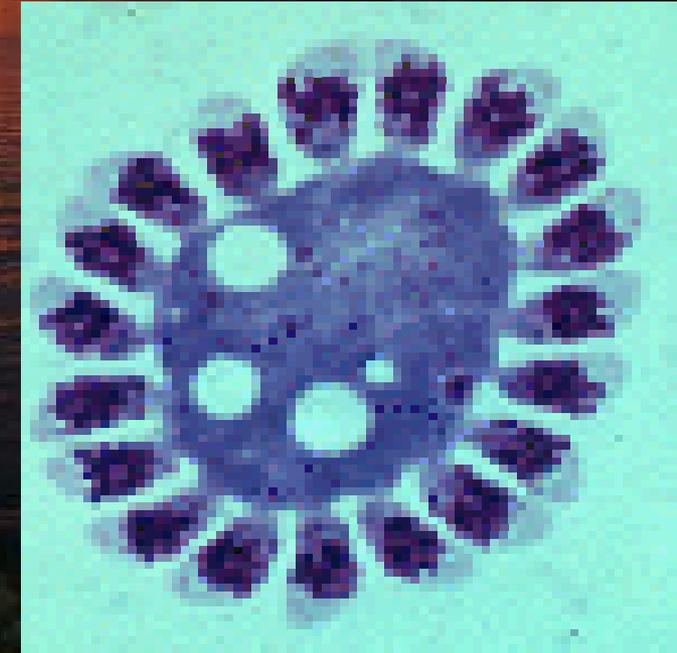


“We’ve had 30 so-called new diseases that have emerged ... SARS ... TB.

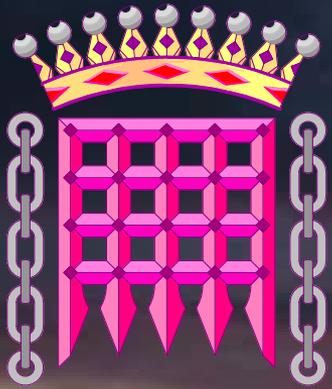
There has been a re-emergence of some diseases that were once under control.

The avian flu ...
West Nile Virus ...

These are very troubling times.”

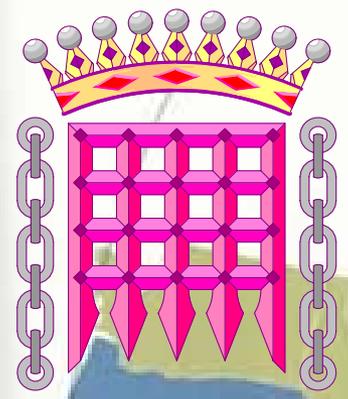


ERROR
28

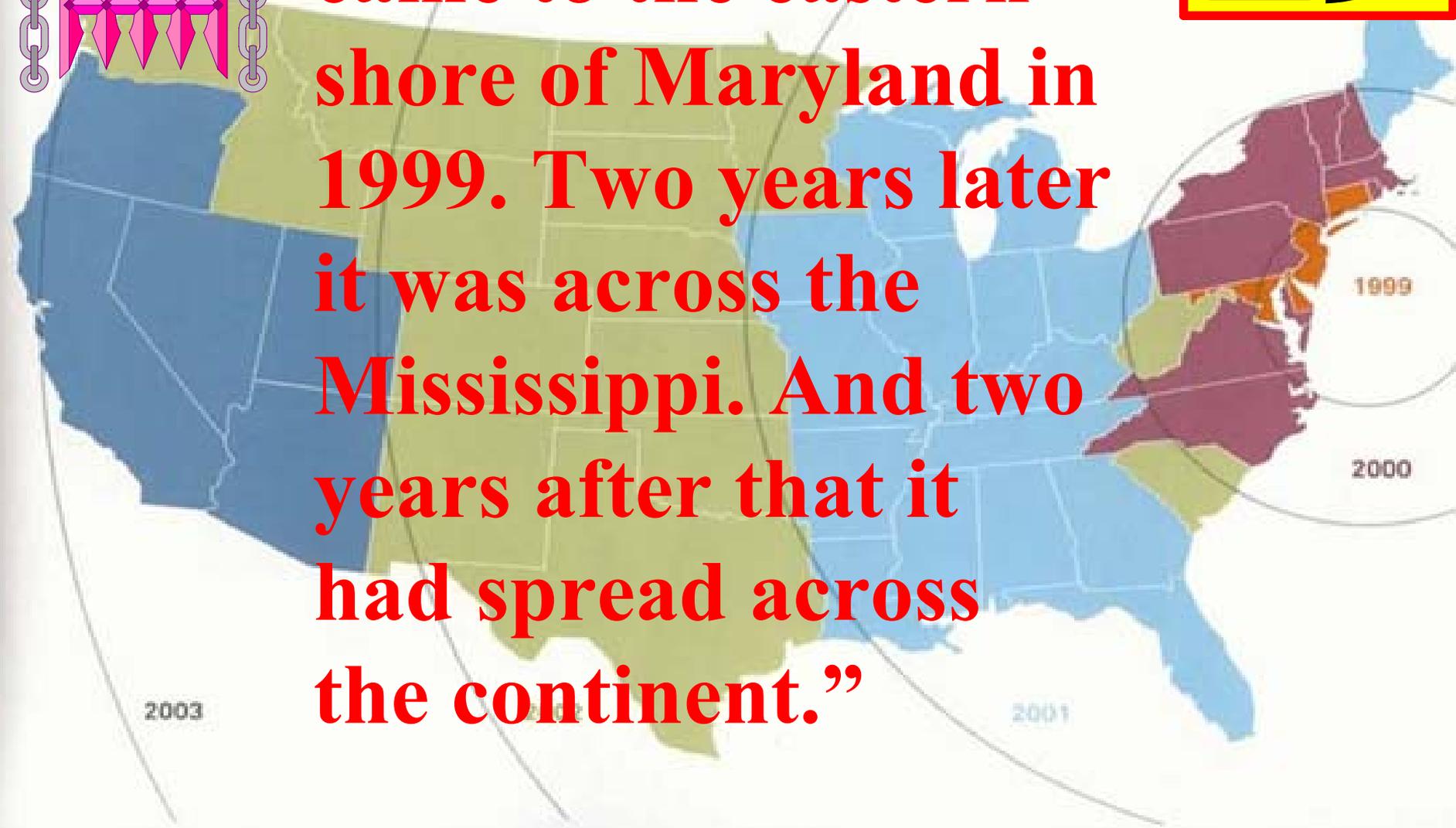


**All Gore's
diseases
are not
affected by
global
warming**

Dengue fever	Not tropical
Lyme disease	Not tropical
Malaria	Not tropical
West Nile virus	Not tropical
Arena virus	Rats
Avian flu	Chickens
Ebola virus	Primates?
E. Coli 0157:H7	Poor hygiene
Hanta virus	Rats
Legionella	Air conditioning
Leptospirosis	Rats
MDR TB	Cold weather
Nipah virus	Pigs
SARS	Cold weather
Vibr.Chol. 0139	Poor hygiene



“West Nile Virus came to the eastern shore of Maryland in 1999. Two years later it was across the Mississippi. And two years after that it had spread across the continent.”

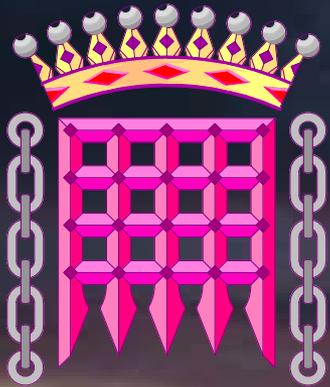


2003

2001

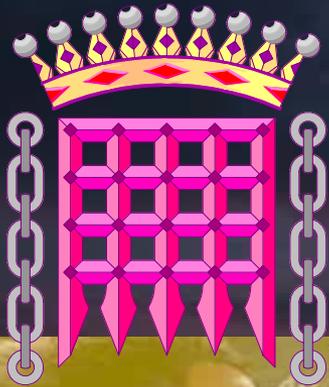
1999

2000

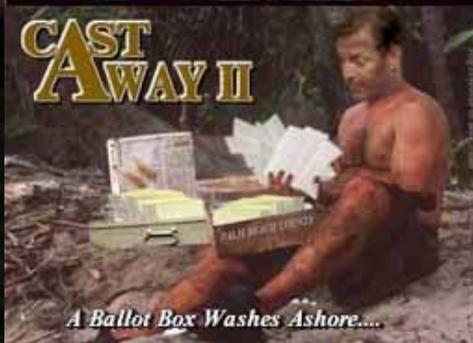
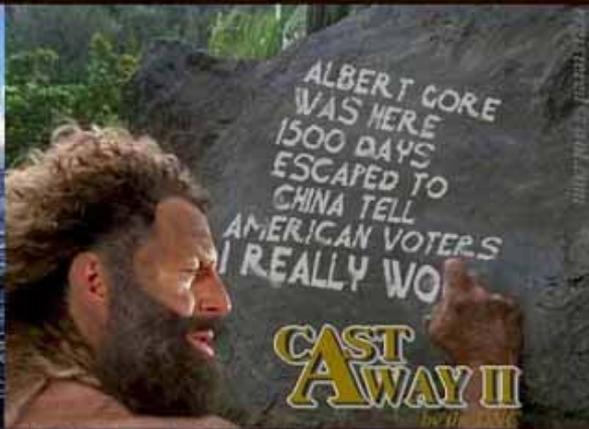
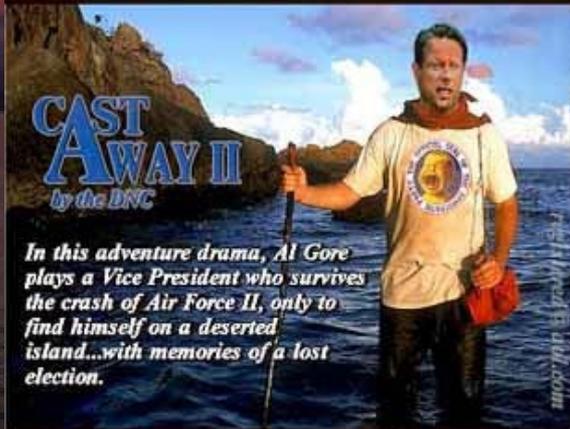


West Nile virus is not influenced by climate

The climate in the US ranges from some of the world's hottest deserts to some of its iciest tundra. The West Nile Virus flourishes in any climate. Warming of the climate, however caused, does not affect its incidence or prevalence.

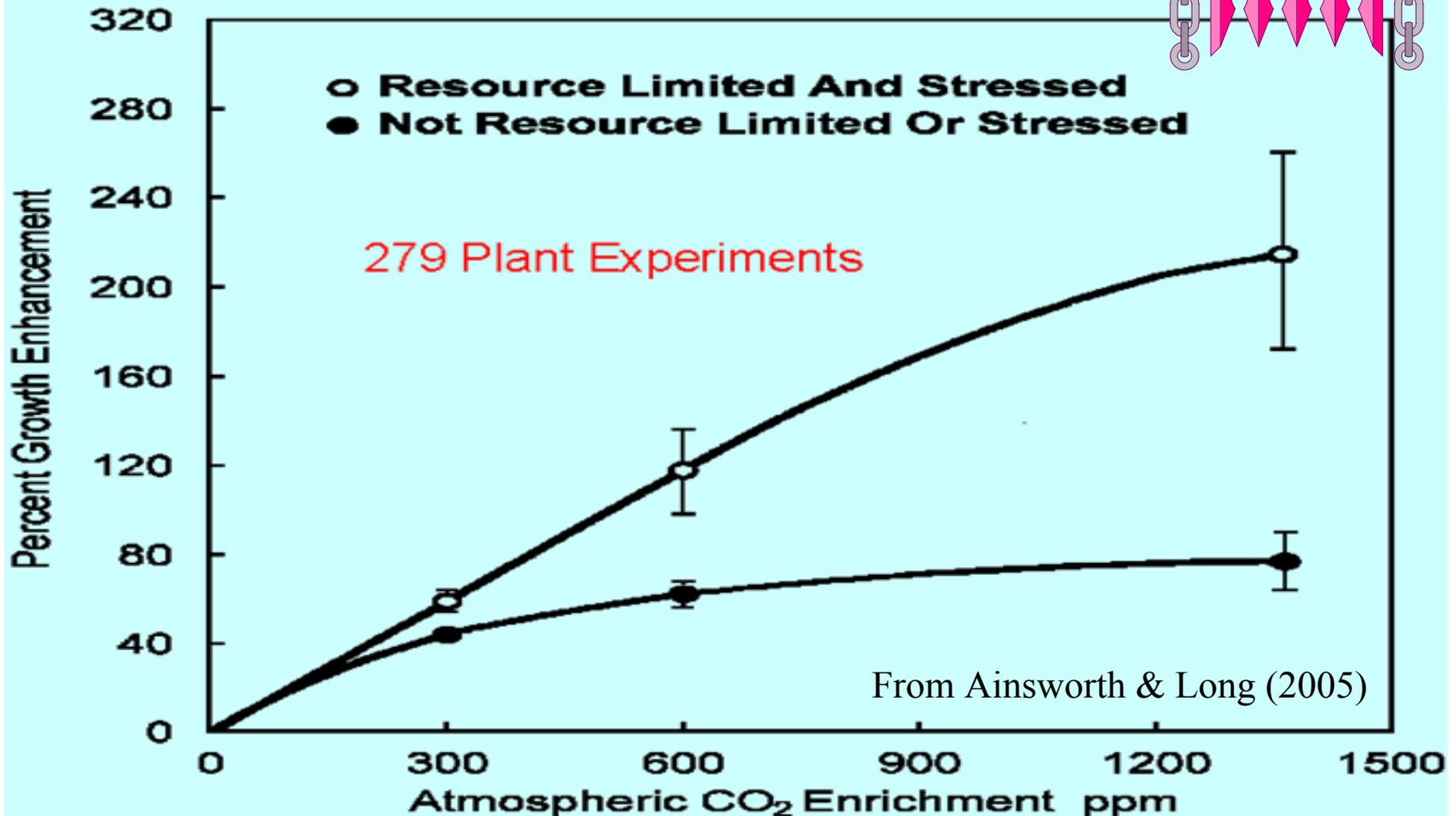
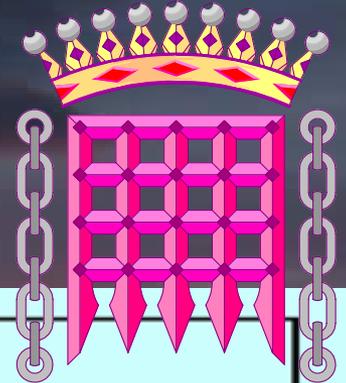


ERROR 30

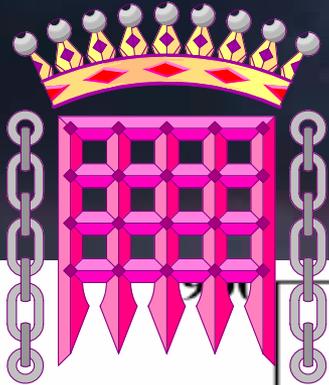


“The problem is that this thin layer of atmosphere is being thickened by all of the global warming pollution that is being put up there.”

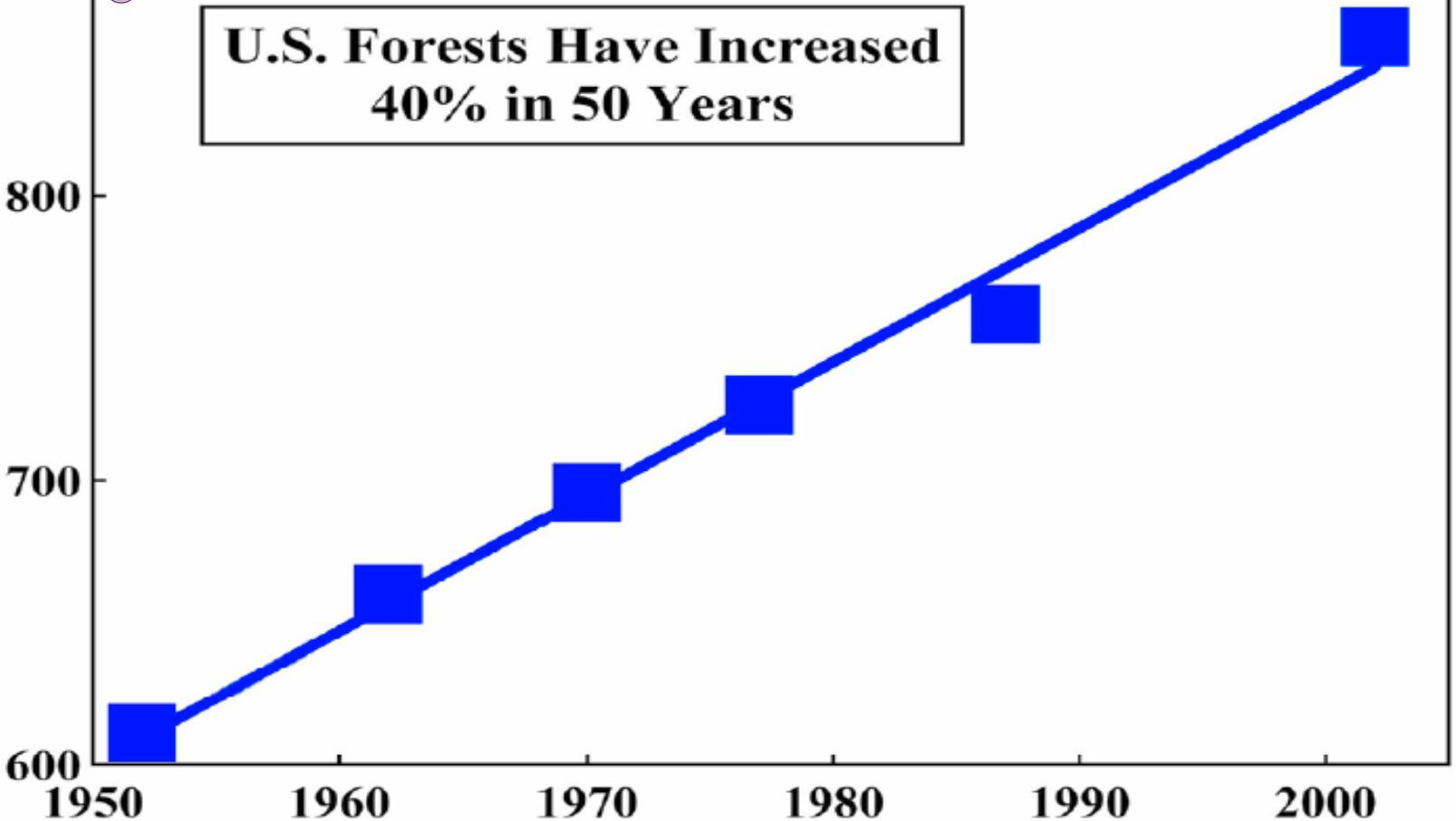
CO₂ enrichment enhances tree and plant growth ...



CO₂ is tree-food



Hardwoods and Softwoods
Billions of Cubic Feet





ERROR
31

HAIRCUT AT THE MALL: **\$10**

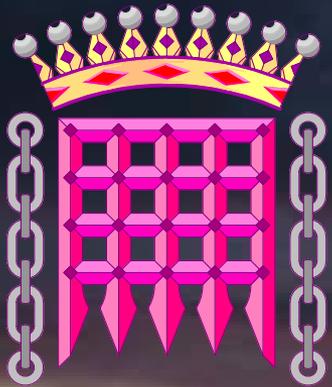
SUIT OFF THE RACK: **\$300**

LOSING THE PRESIDENTIAL ELECTION
BECAUSE NINETEEN THOUSAND OF
YOUR SUPPORTERS ARE TOO DAMNED
STUPID TO FOLLOW DIRECTIONS AND
FILL OUT THEIR BALLOTS PROPERLY: **PRICELESS**



FOR EVERYONE ELSE, THERE'S GEORGE W. BUSH

“A couple of years ago in Europe they had that massive heatwave that killed 35,000.”



Some scientists agree with Gore, but ...

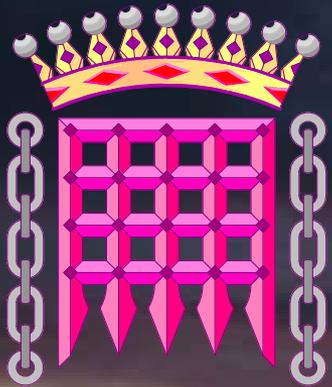
“Extreme warm anomalies ... more unusual than the 2003 heatwave occur regularly; extreme cold anomalies also occur regularly; El Niño and volcanism appears of much greater importance than any general warming trend; regression analyses do not provide strong support for the idea that regional heat or cold waves are significantly increasing or decreasing with time.”

Chase et al. (2006)

ERROR
32

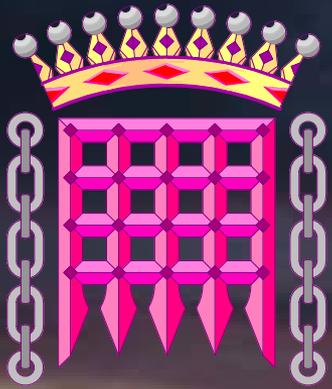


“The peak arrival date for migratory birds 25 years ago was April 25. Their chicks hatched on June 3, just at the time when the caterpillars were coming out: Nature’s plan. But 20 years of warming later the caterpillars peaked two weeks earlier. The chicks tried to catch up with it, but they couldn’t. So they are in trouble.”



Species can adapt to changing climate

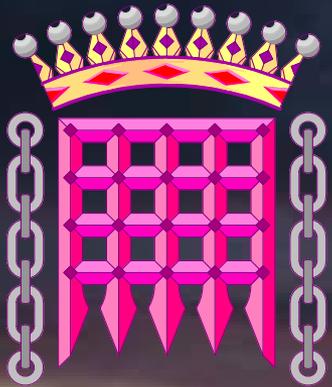
The pied flycatchers can easily adapt to changing climate by flying a few dozen miles northward to compensate for the warmer climate. What is bad news for the birds is good news for the caterpillars that escape to become butterflies.



**ERROR
33**

**“But 20 years of
warming later
the caterpillars
peaked two
weeks earlier.”**





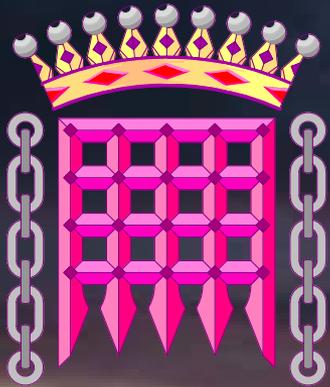
OOPS!

**It's not a pied
flycatcher: it's a
black tern.**

OOPS!

**It's not a
caterpillar:
it's a fish**



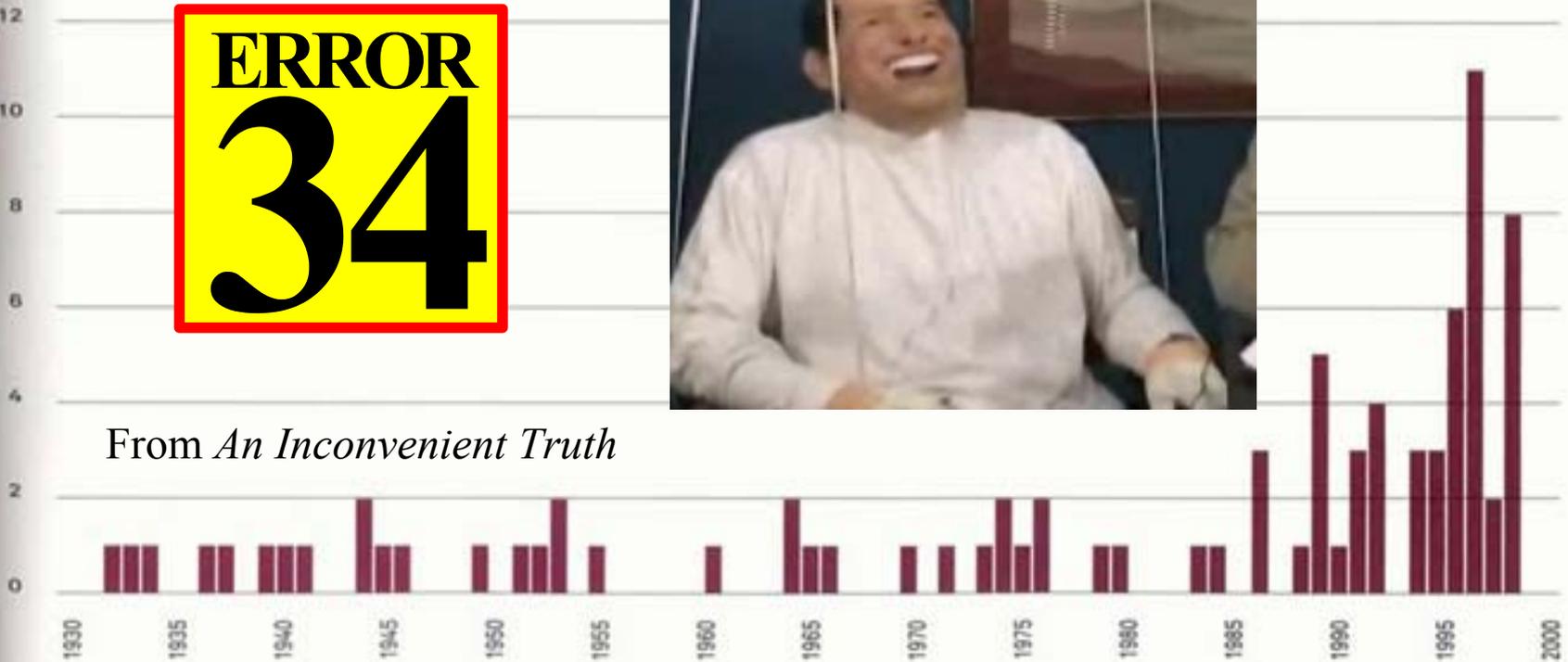


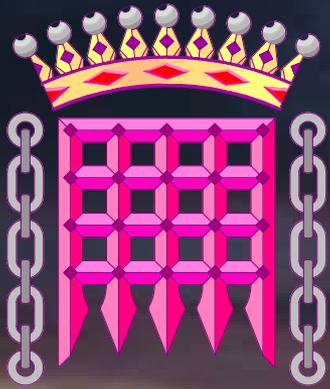
The Thames Barrier Lie

ANNUAL CLOSURES OF THE THAMES BARRIERS

**ERROR
34**

From *An Inconvenient Truth*

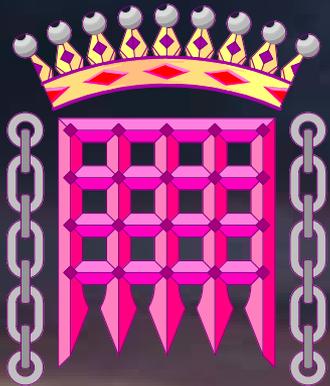




So, why the extra barrier closures?

FACT: The Thames barrier is closed no more often today to keep high seas out than when it was built.

FACT: Extra closures are now made to hold water in the tidal reaches of the Thames – nothing to do with “global warming”.

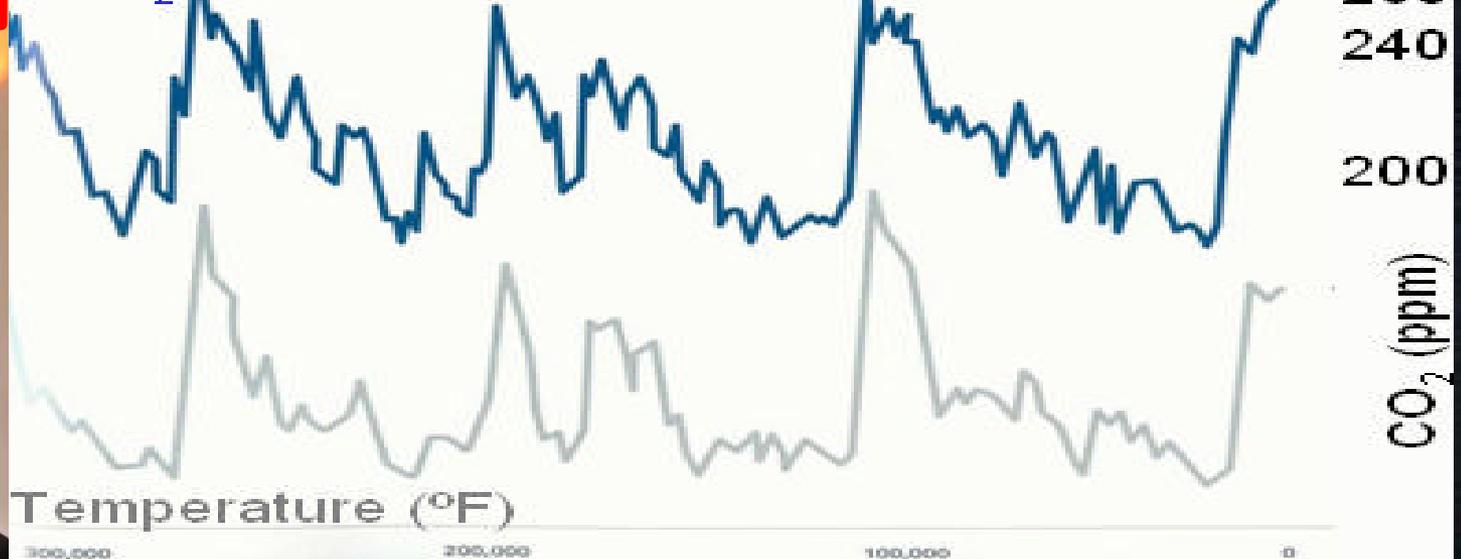


The CO₂ growth lie

And within 45 years this is where the CO₂ equivalent levels will be if we do not make dramatic changes quickly.

Here's where CO₂ is now – way above anything measured in the prior 650,000-year record.

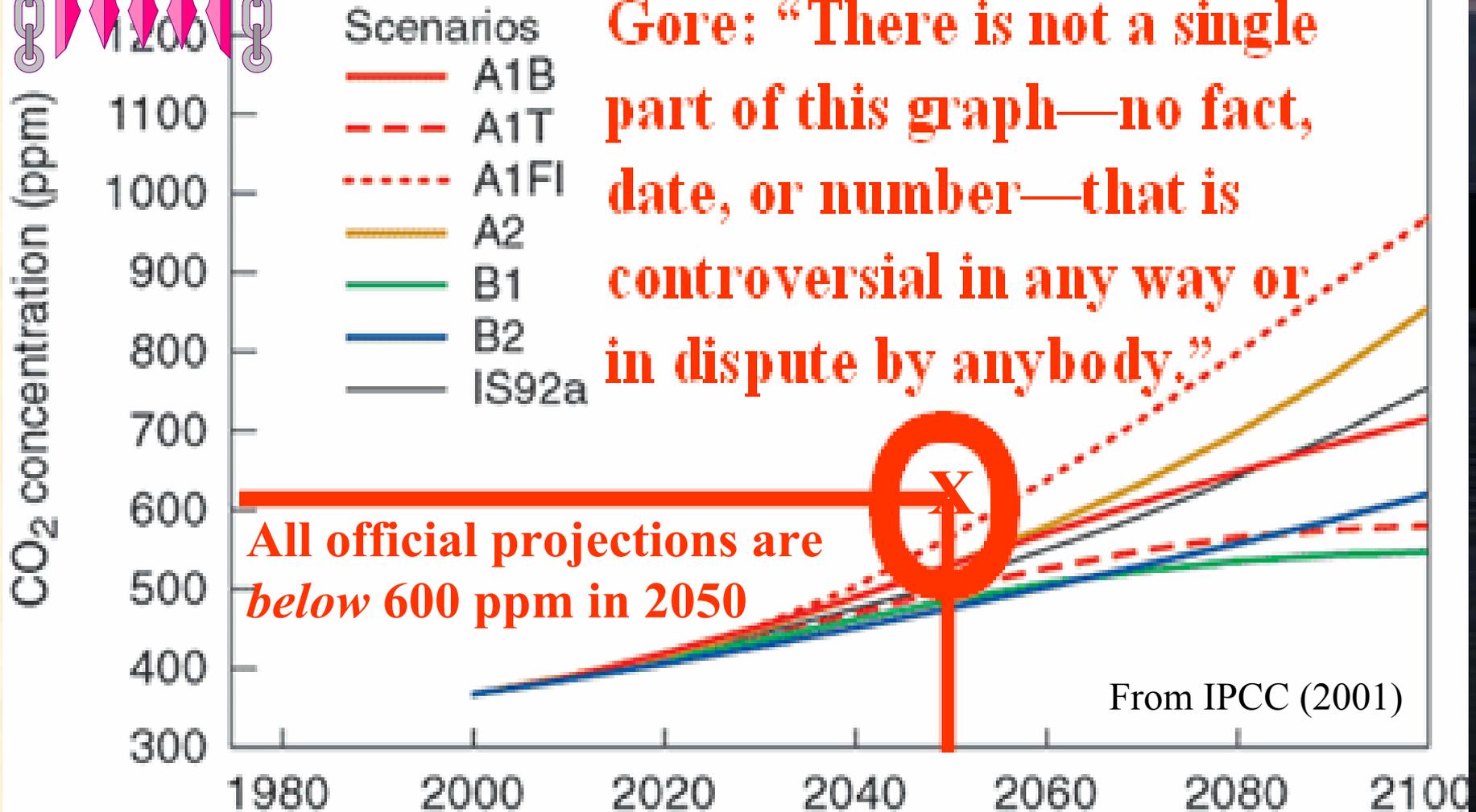
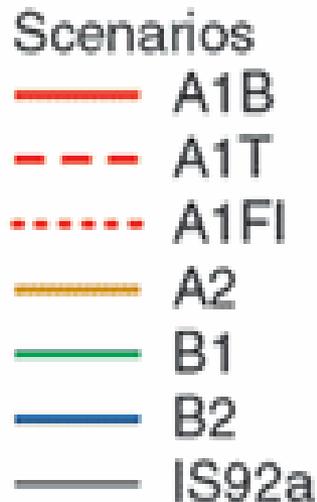
CO₂ concentration



ERROR
35

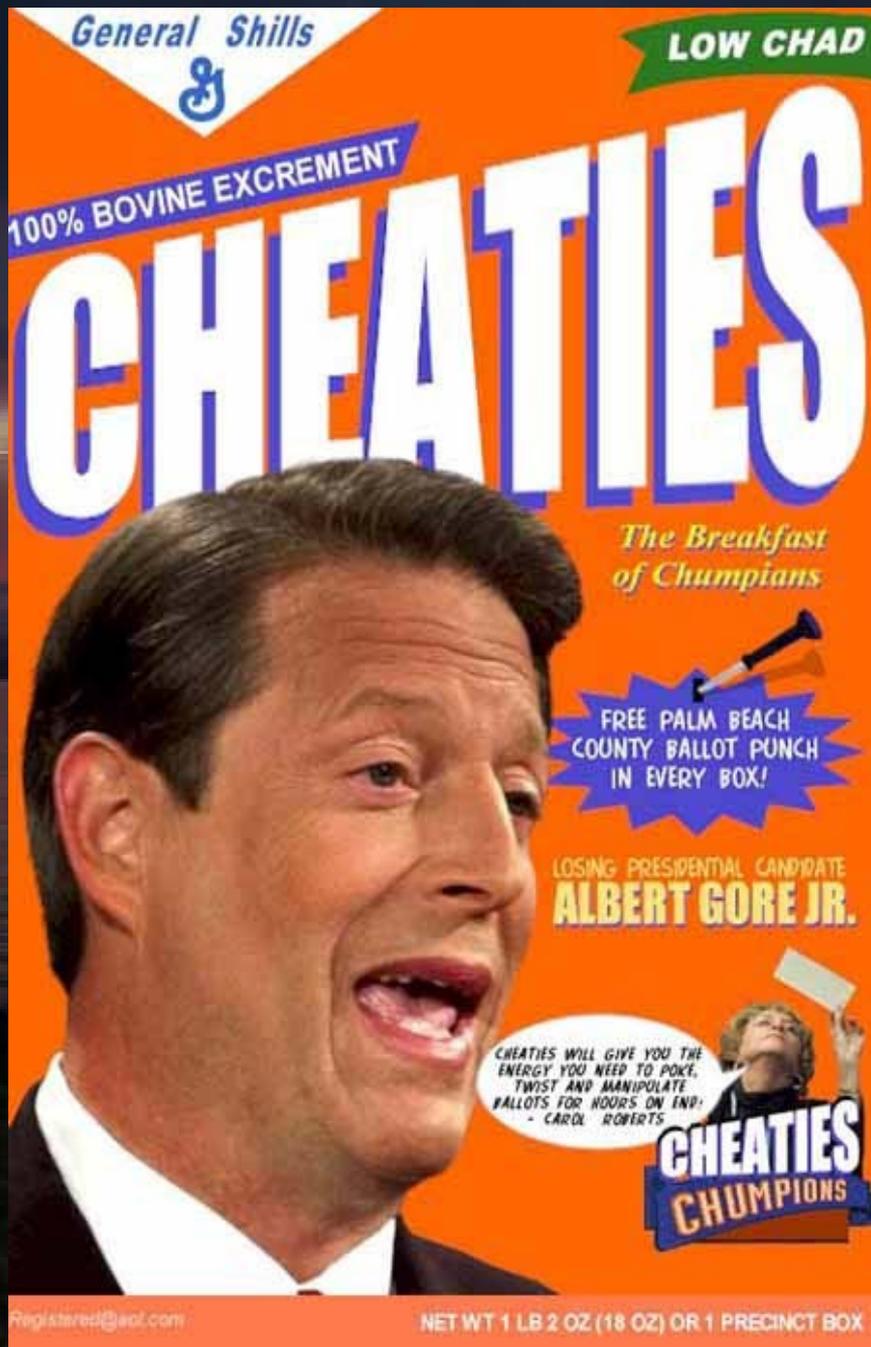


The lie nailed:

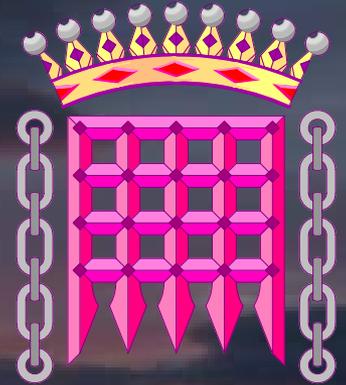


Gore: "There is not a single part of this graph—no fact, date, or number—that is controversial in any way or in dispute by anybody."

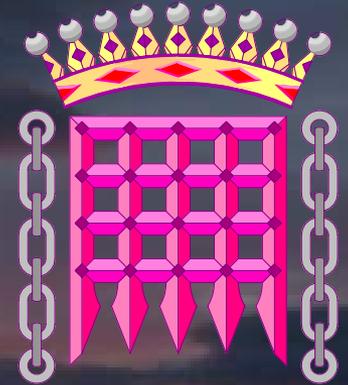
All official projections are below 600 ppm in 2050



35
ERRORS

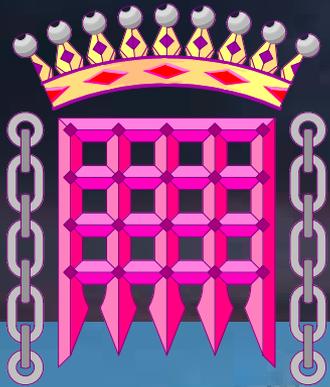


Odds against **35**
errors pointing
in one direction
by inadvertence:
<1 in 34 billion



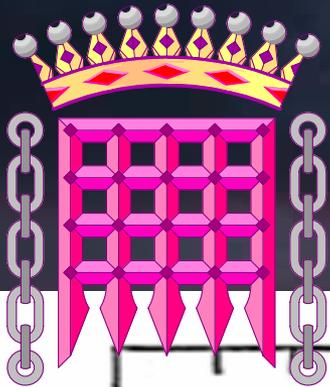
“There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.”

Mark Twain



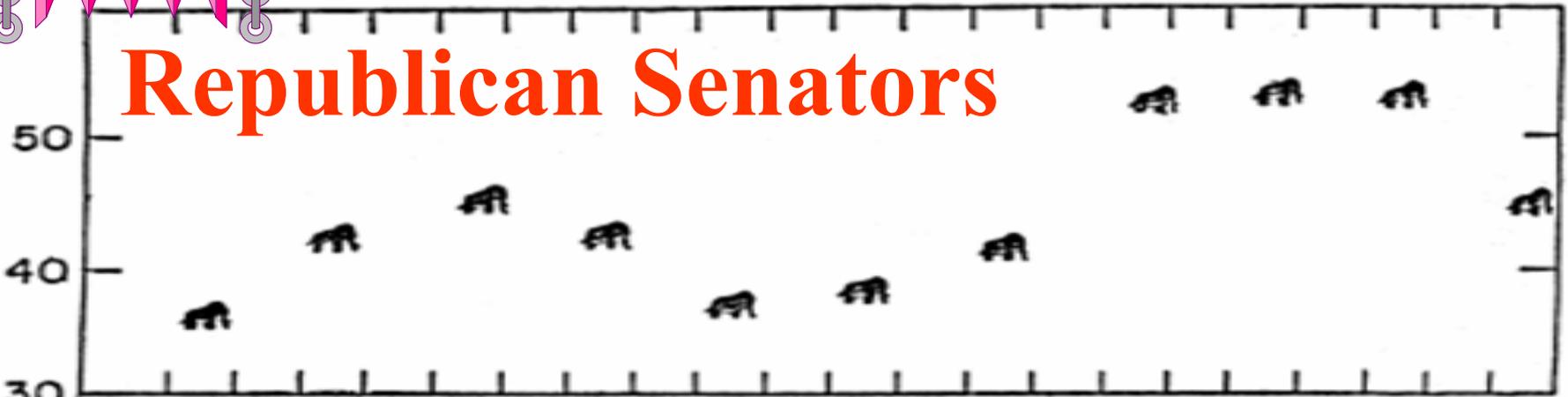
1: The fact of warming
does not tell us the cause



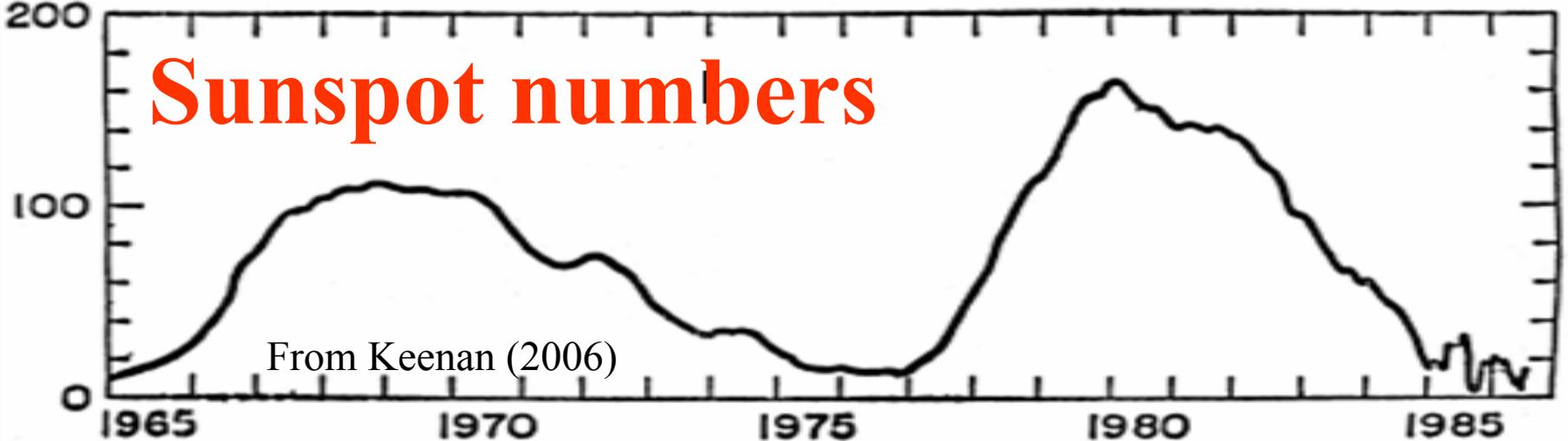


2: Correlation need not imply causation

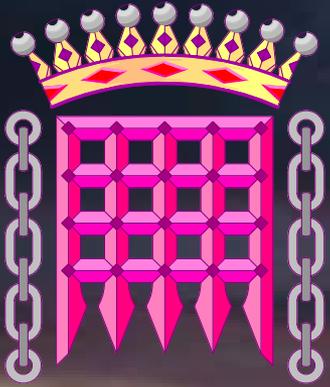
Republican Senators



Sunspot numbers



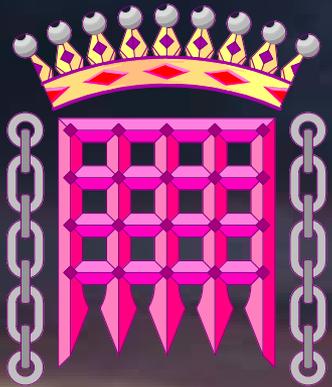
From Keenan (2006)



3: Warmer is better

“The greatest economic benefit derived from the improved climate will ... be increased vegetation growth.”

Ahlmann, 1948



I'm
still
waiting,
AI!

New York Times
March-Nov 2007

CHALLENGE DEBATE

GLOBAL WARMING IS
NOT A CRISIS



FOR

Lord Monckton
Scottish Peer, former advisor
to Margaret Thatcher, and
international business consultant



AGAINST

Al Gore
Vice President of the US
1993-2001, author,
An Inconvenient Truth

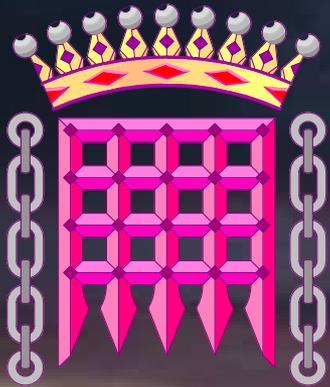
VS

For more information about this challenge debate and global warming,
please go to www.globalwarmingheartland.org.

The Heartland Institute is a 23-year-old national nonprofit organization devoted to discovering, developing, and promoting free-market solutions to public policy problems. For more information please visit our web site at www.heartland.org.



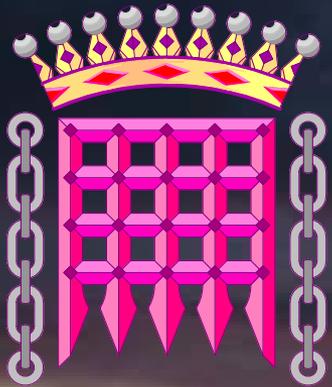
Macroeconomic considerations



Tol on Stern



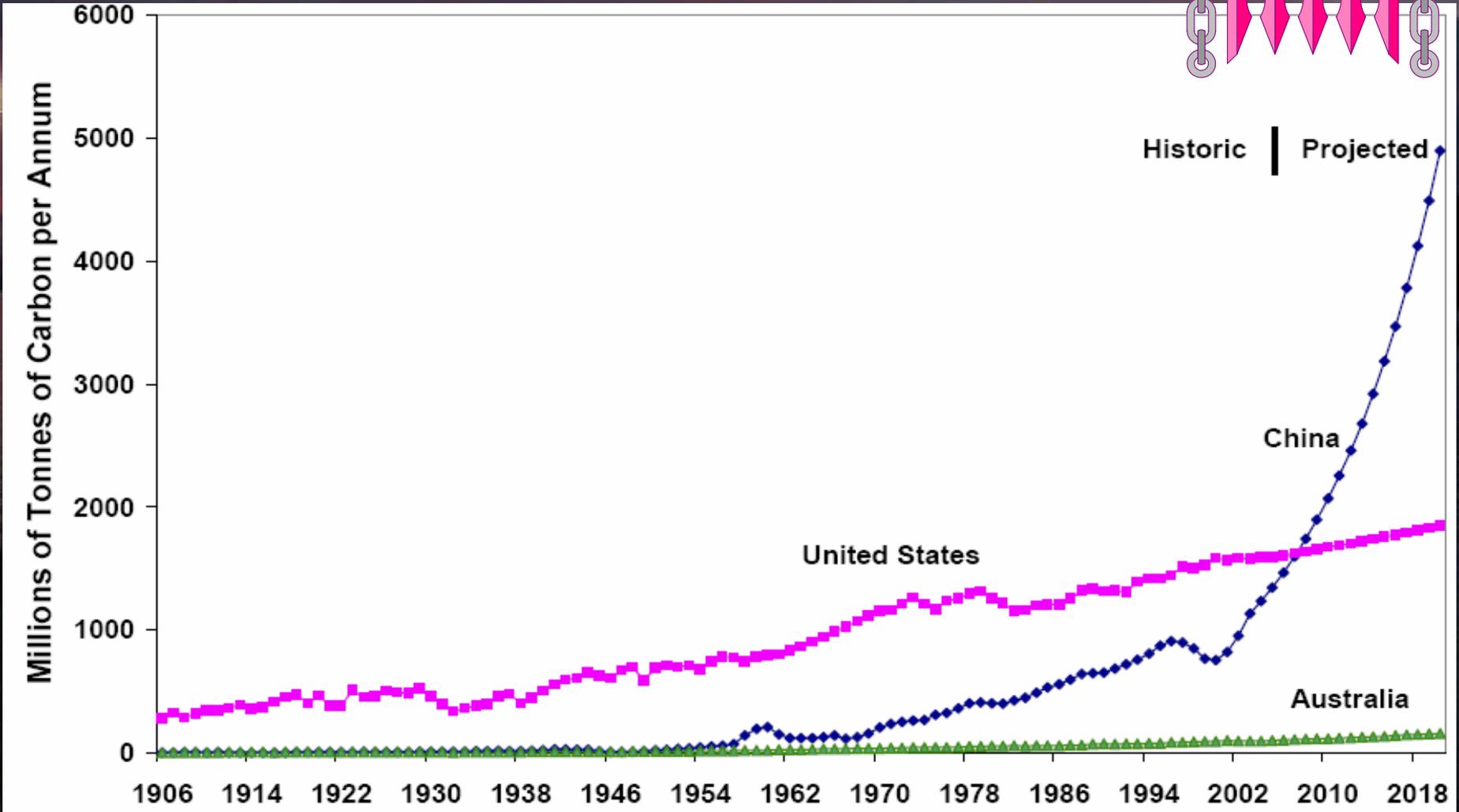
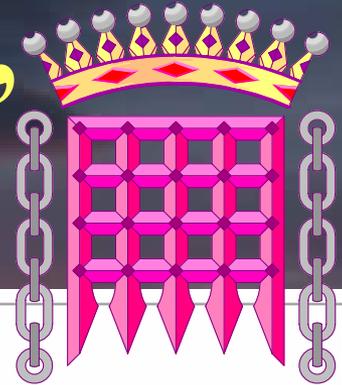
“If a student of mine were to hand in this report as a Master’s thesis, perhaps if I were in a good mood I would give him a ‘D’ for diligence; but more likely I would give him an ‘F’ for fail. There is a whole range of very basic economics mistakes.”



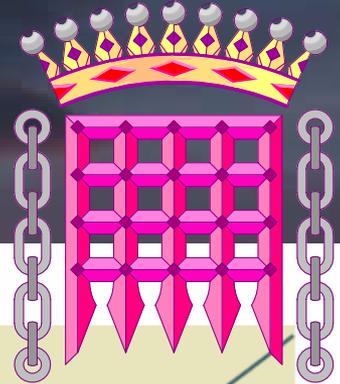
Economist.com

“Economic ... forecasts and calculations will ... provide the basis for policy .. Yet governments have been content to leave these questions to a body – the IPCC – which appears to lack the necessary expertise. The result is all too likely to be bad policy, at potentially heavy cost to the world economy.”

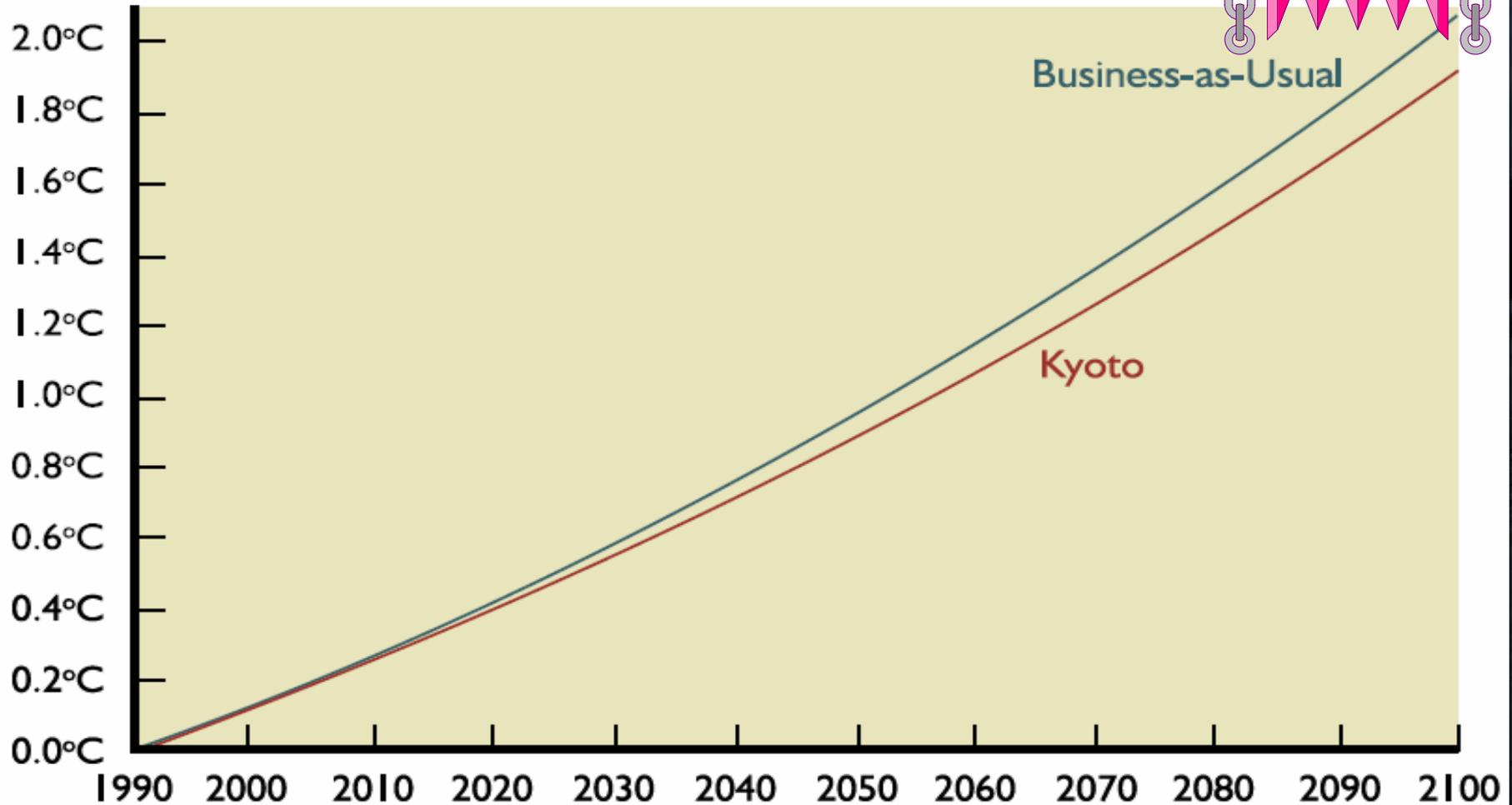
The West: not the problem, therefore not the solution

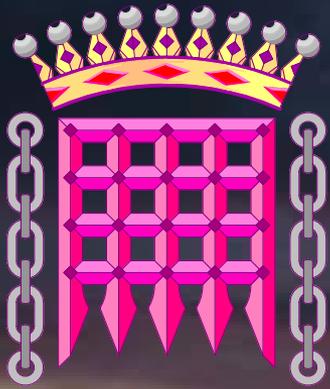


Kyoto: costly and futile



Temperature Change

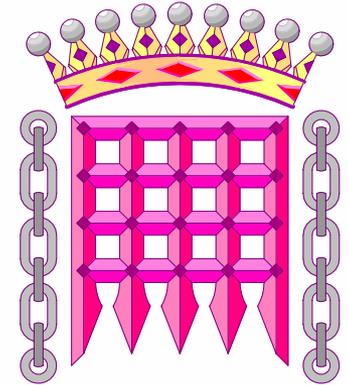
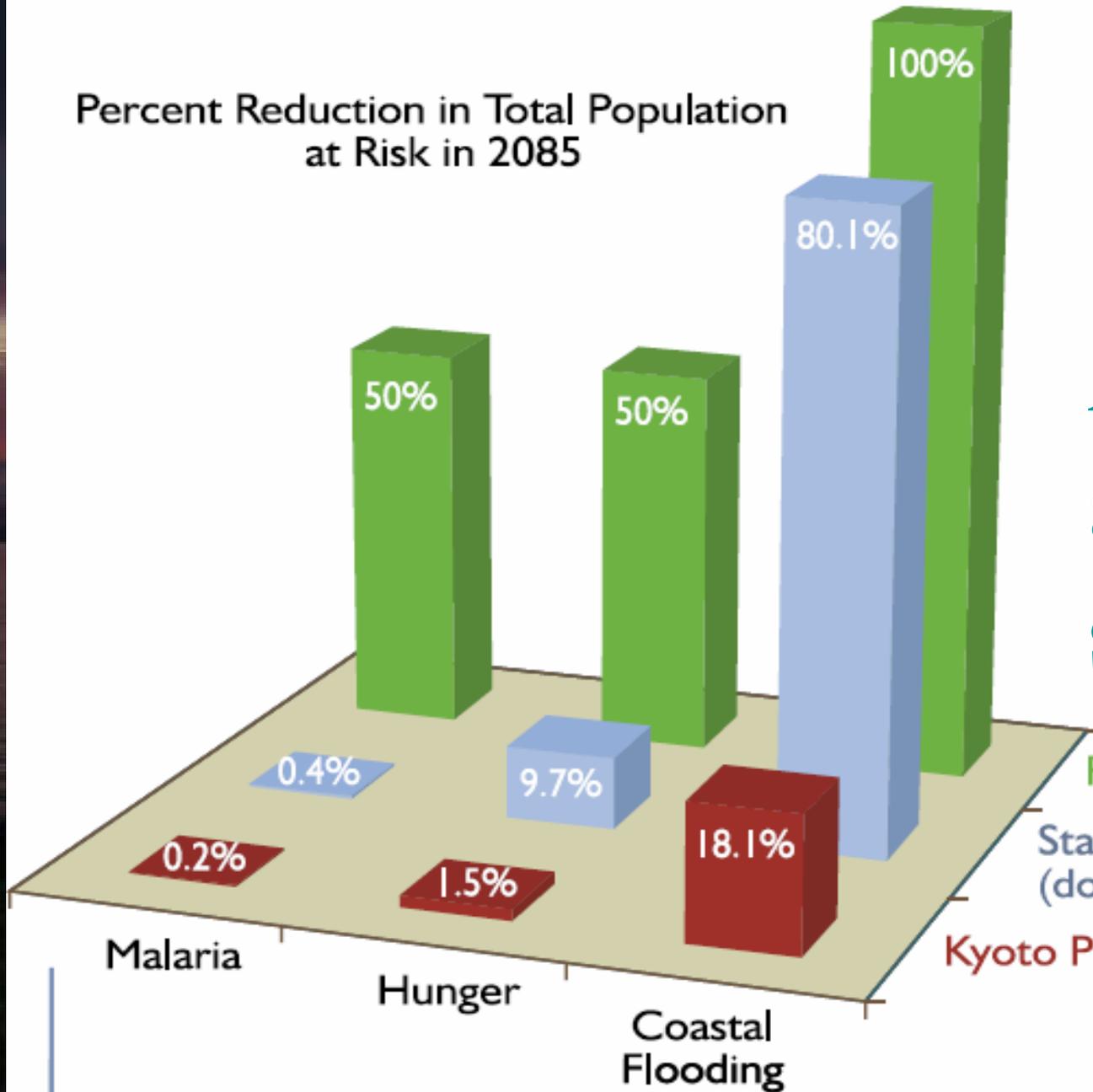




The heavy costs
of mitigation
compared with
the low cost
of adaptation



Percent Reduction in Total Population at Risk in 2085



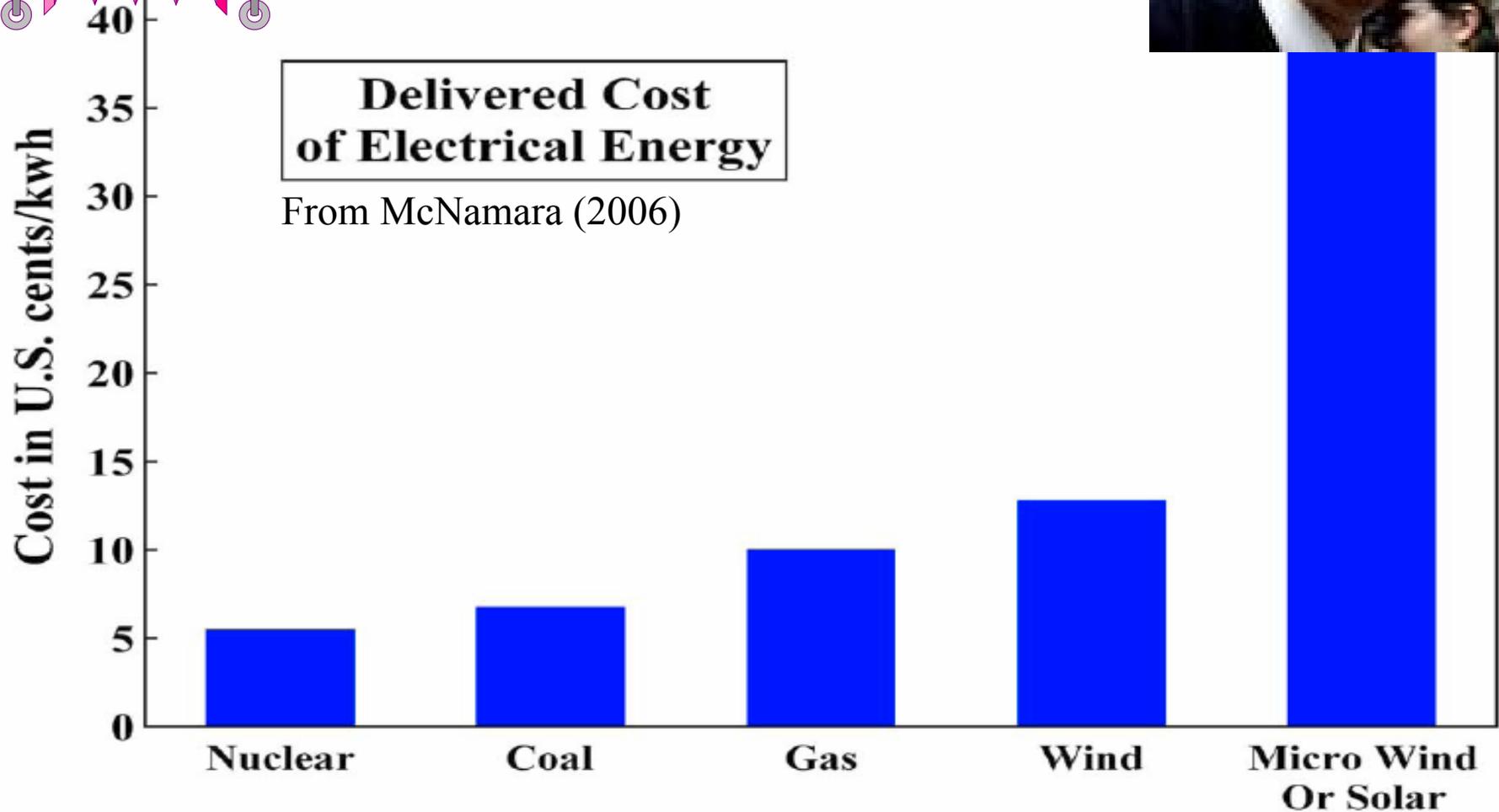
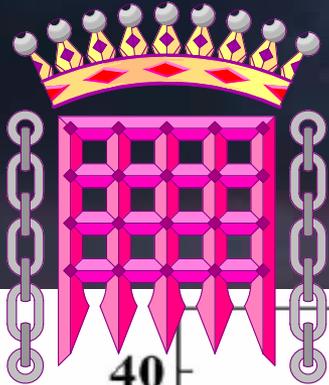
Adapt and survive

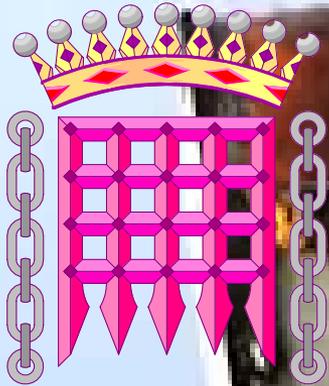
Focused Adaptation

Stabilize CO₂ at 550 ppm (double preindustrial level)

Kyoto Protocol

Gesture politics: Costly and futile



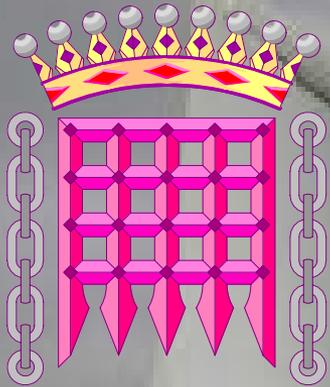


Huge CO₂ abatement cost of futile wind turbines

Nuclear: \$0.60/teCO₂

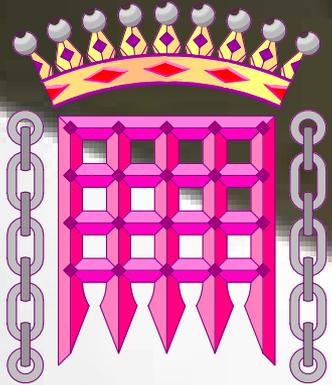
Wind: \$100.00/teCO₂

Gearbox burnout on a wind turbine



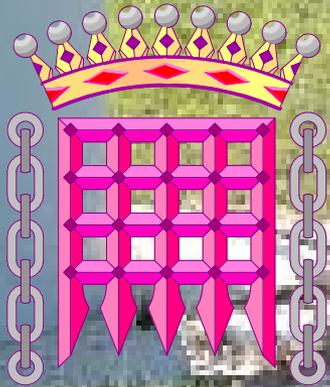
Generating capacity:
Fossil, nuclear 98.4%
Wind etc. 1.6%

Gale destroys a wind turbine



**No
wind
= no
power**

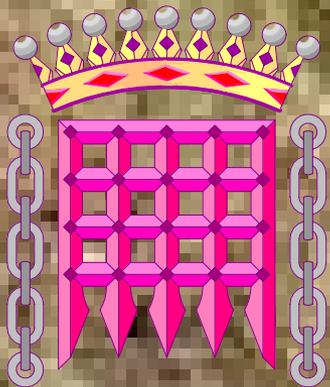
Propeller failure on a wind turbine



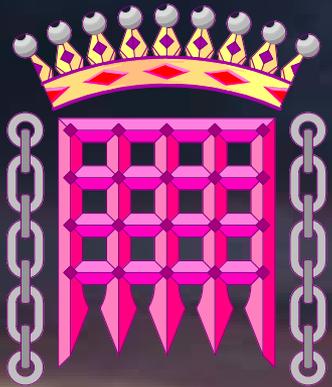
**Short-toed eagle
killed in Navarre
by a wind-farm**



**Griffon vultures
killed in Navarre
by a wind-farm**



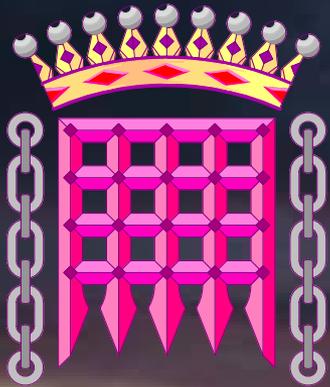
**Mallard drake
killed in Flanders
by a wind-farm**



Costly futility of Energy Performance Certificates

“New homeowners acting on information provided in an Energy Performance Certificate will have to wait up to 208 years to recoup the costs of their energy-saving measures.”

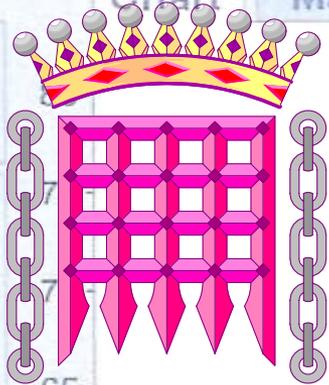
RICS (2007)



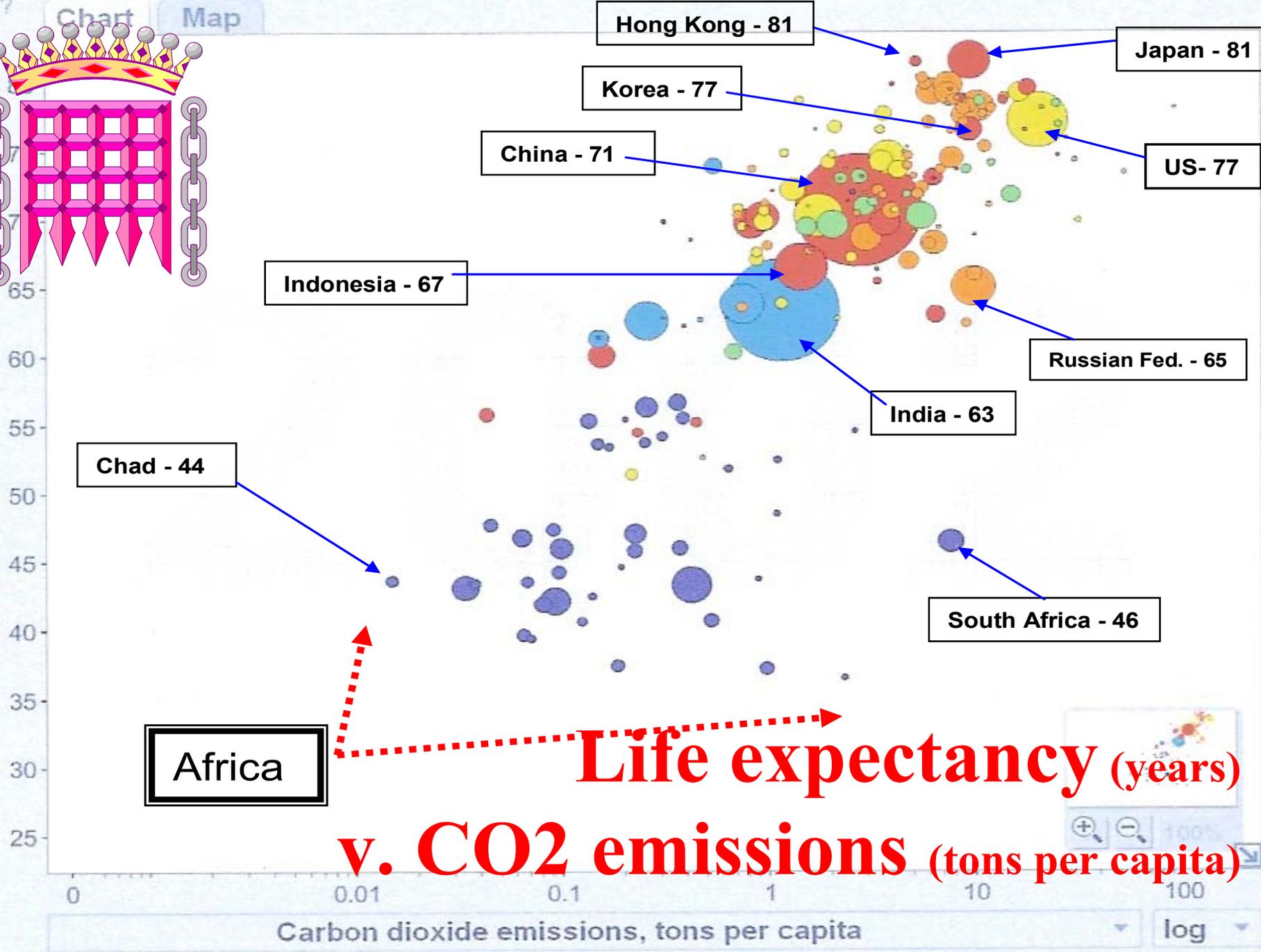
**Costly futility of biofuels:
even the UN opposes them**

**“There should be a five-
year moratorium on
biofuel development”**

Herr Ziegler, UN spokesman (2007)



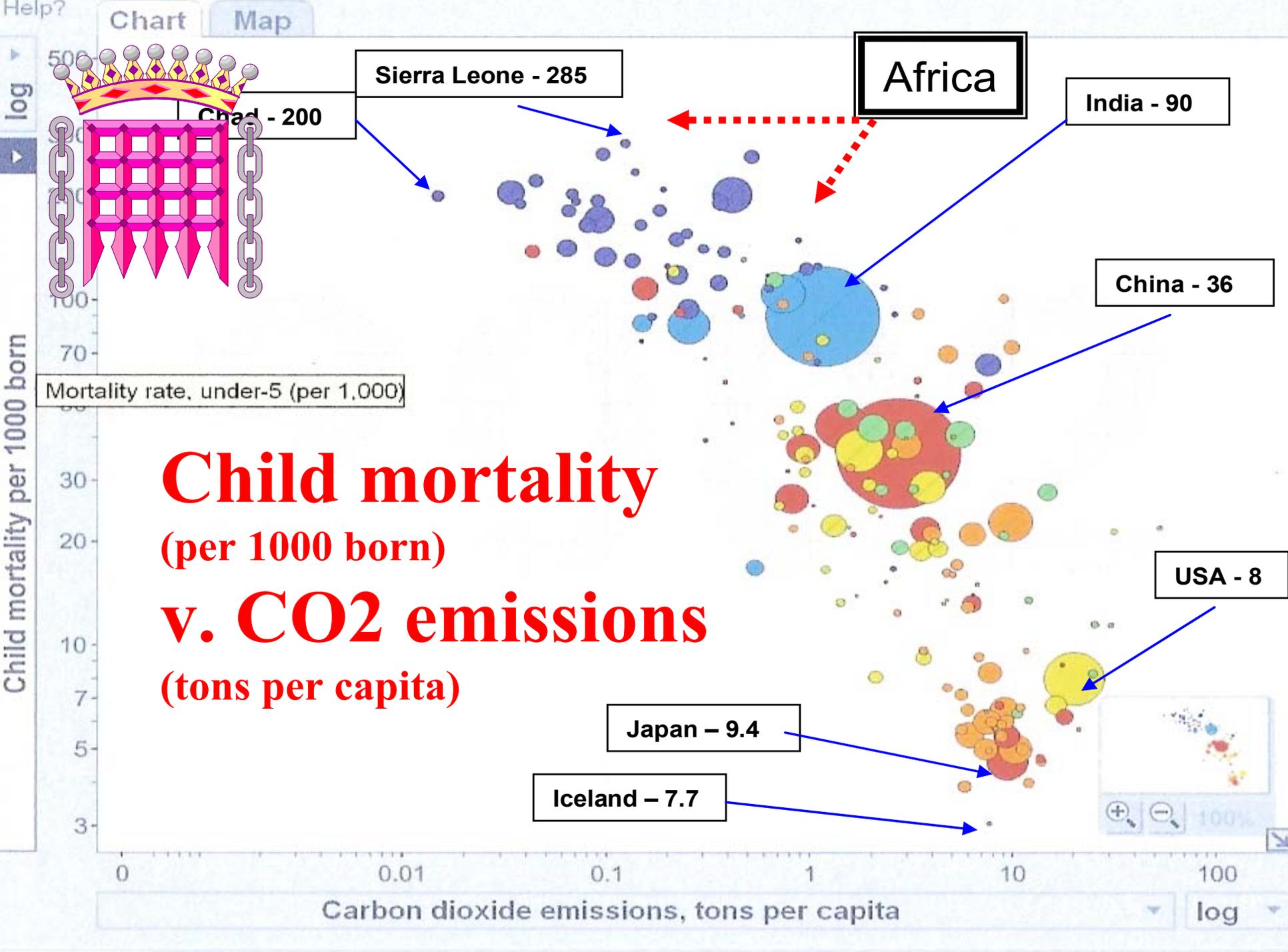
Life expectancy, years

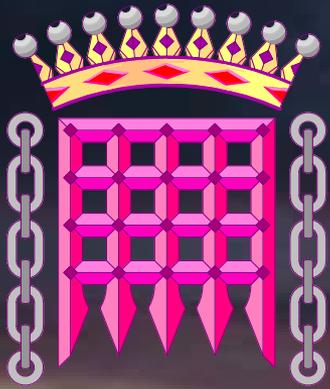


Africa

Life expectancy (years)
v. CO2 emissions (tons per capita)







**Energy
source:**



Africa's energy cycle

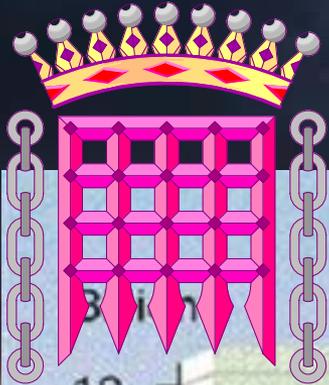
**Energy
transmission:**



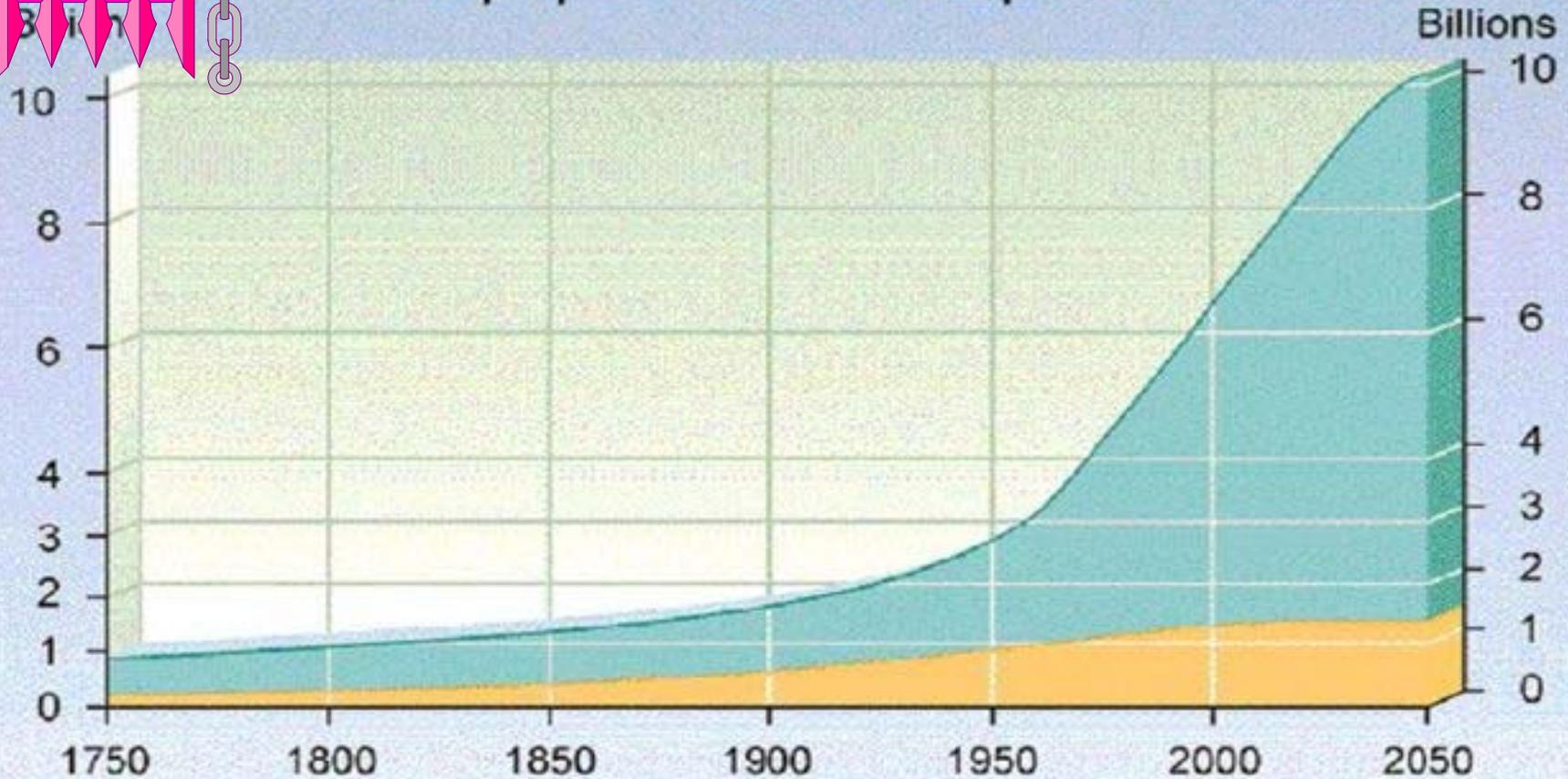
**Energy
use:**



The population paradox

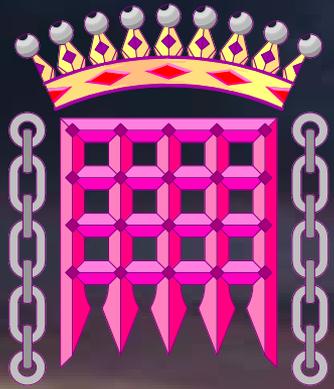


World population development



Developing countries
Industrialized countries





Law of Opposite Consequences

“Economic intervention
by the State tends to
bring about not merely
unintended consequences
but the very opposite
of what was, however
piously, intended.”



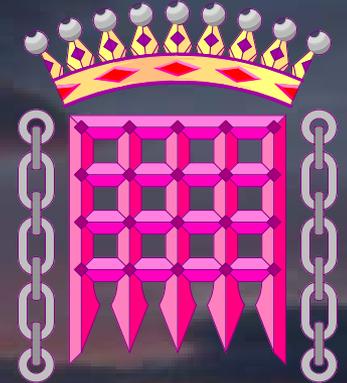


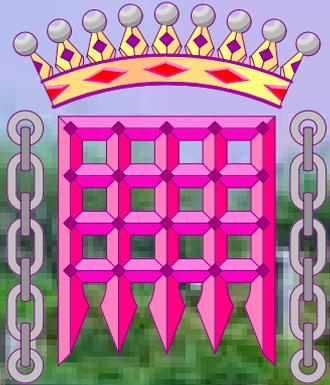
Previous public policy failures

HIV

"Realization of human Rights and fundamental freedoms for all is essential to reduce vulnerability to HIV/AIDS. Respect for the rights of people living with HIV/AIDS drives an effective response"

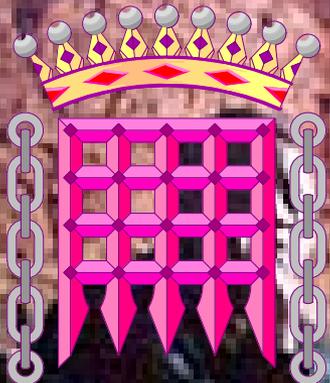
Declaration of Commitment adopted at the United Nations General Assembly Special Session on HIV/AIDS, June 2001





Who respected *their* rights?



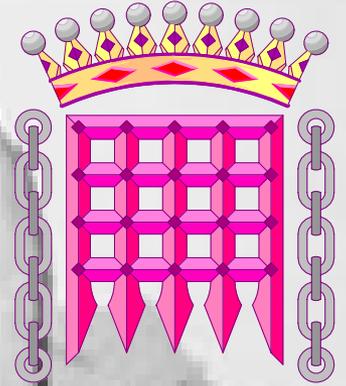


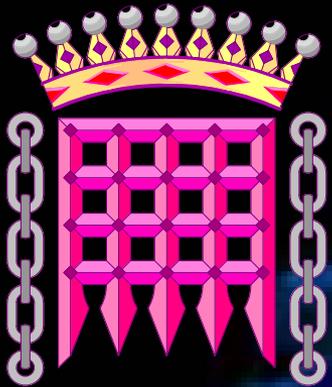
Or his?



Reuters

The tragic human cost of abject policy failure





HIV

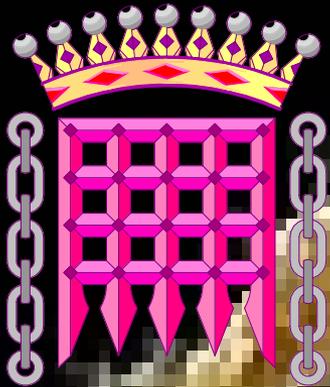
25,000,000 dead worldwide

40,000,000 infected worldwide

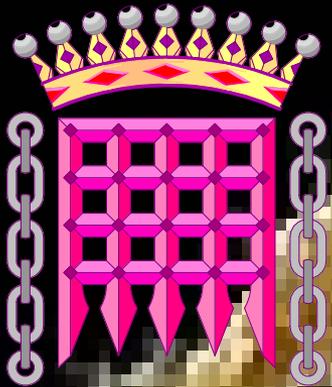
7.5% infected south of the Sahara

0.7% infected in the United States

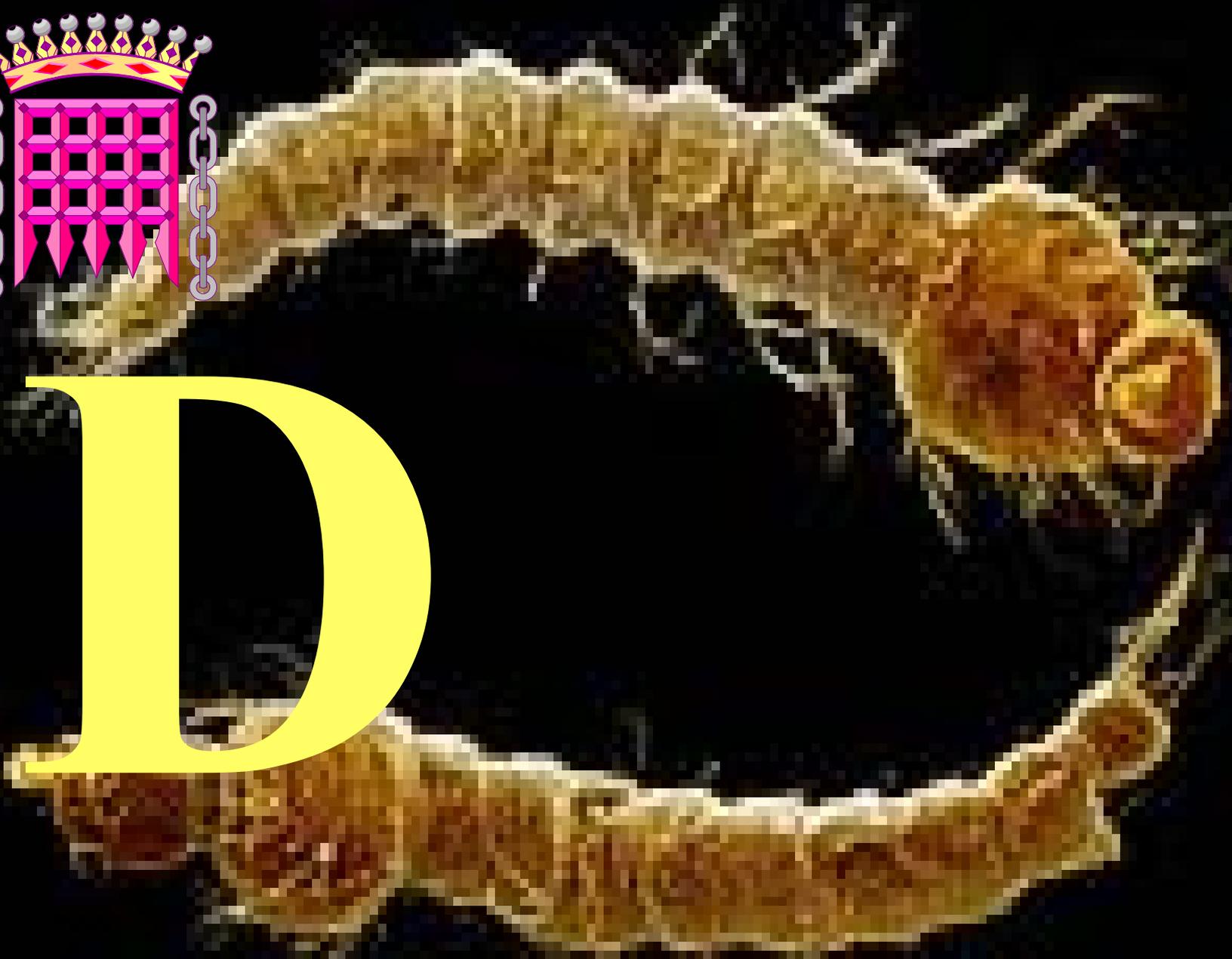
1.0% is the epidemic threshold

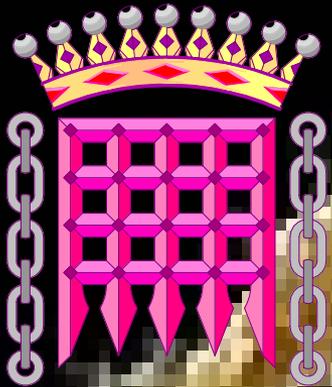


MALARIA

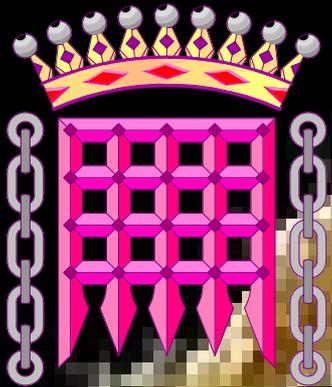


D

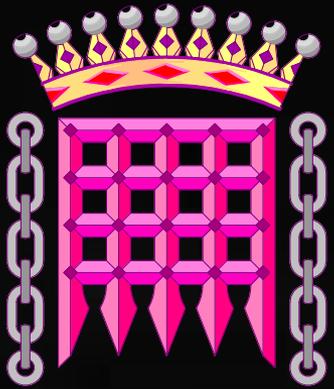




DD



DDT

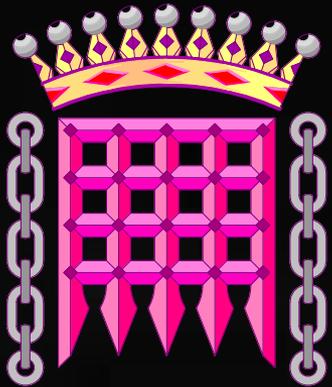


Global annual malaria deaths

Before the DDT ban: 50,000

After the DDT ban: 1,000,000

All excess deaths: 40,000,000



**WHO lifted the DDT ban
on 15 September 2006**

**“Quite often in this field
politics comes first and
science second. We must
take a position based on the
science and the data.”**

Dr. Arata Kochi, WHO



**Worse crises
than climate**

**Prob-
lems,
prob-
lems**

Global Islamic terrorism

Chinese neo-militarism

Russian neo-imperialism

Mass economic migration

Security of energy & water supply

Environmental degradation

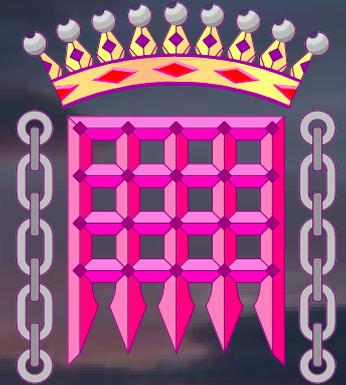
Natural resource depletion

Bad Third-world government

Drugs and people trafficking

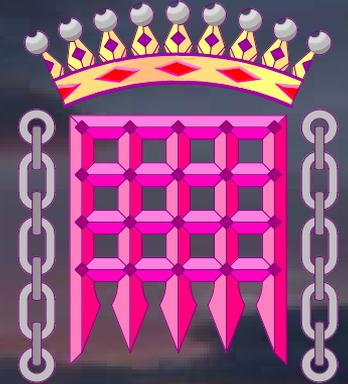
HIV, malaria, TB, MRSA, *C.Diff.*

Bureaucratic centralism vs. voters

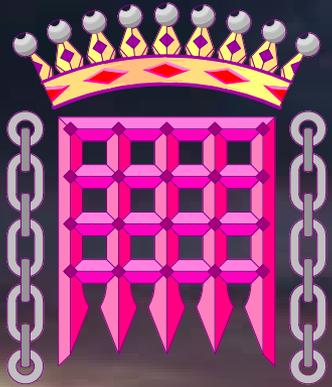




Moral issues

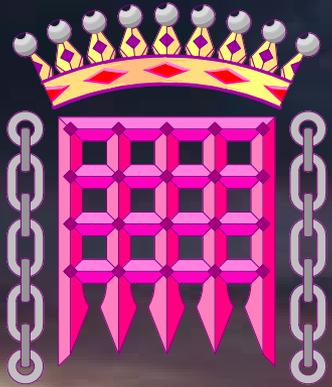


**“I believe
this is a
moral issue.
It is your
time to see
this issue.”**



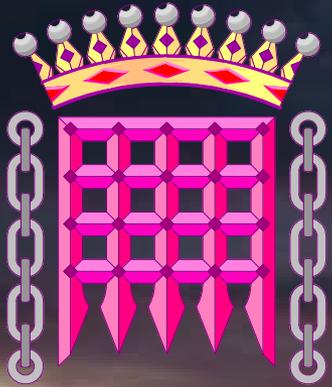
**To “announce disasters”
unjustly is a moral issue**

Al Gore says, “I believe this is a moral issue.” So it is. To announce disasters or scary scenarios; to over-represent factual presentations in place of adherence to the scientific truth – that is a moral issue.



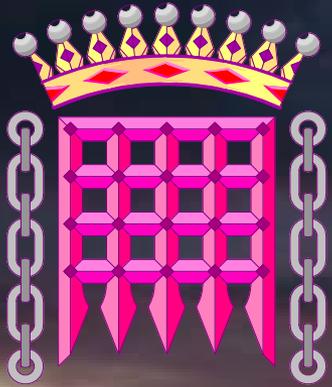
To misstate scientific results is a moral issue

To allow politicians to insert false data into official scientific documents; to alter those documents so as to contradict or overstate scientific conclusions; to manipulate decimal points so as to engender false headlines by exaggerating tenfold – these are moral issues.



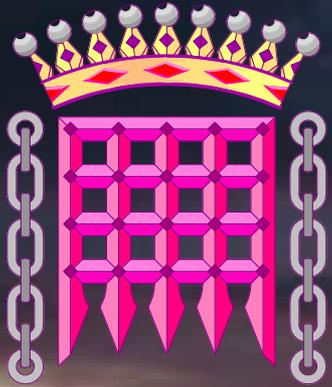
To exaggerate climate science is a moral issue

To exaggerate by 2000% not only the atmospheric lifetime of a trace gas but also the effect of that gas on temperature; to reduce the magnitude of its predicted influence on temperature while raising the predicted temperature itself – those are moral issues.



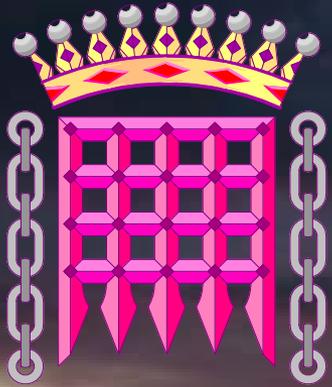
Falsely to claim scientific unanimity is a moral issue

To claim scientific unanimity where none exists; to assert that catastrophe is likely when most scientists do not; to exalt theoretical models over real-world observations; to misstate the meaning of observed data – those are moral issues.



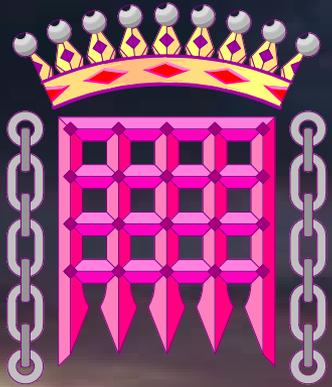
To misrepresent the early climate is a moral issue

To reverse the sequence of events in the early climate; to repeat that reversal in a propaganda book intended to infect the minds of children; to persist in false denial that past temperatures exceeded today's; those are moral issues.



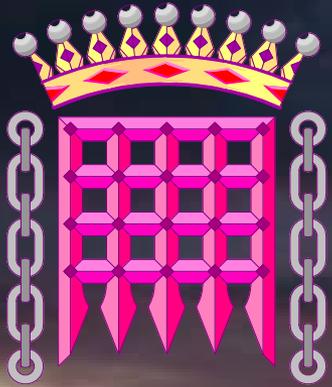
To blame humankind unfairly is a moral issue

To state that climate events that have not occurred have occurred; to ascribe these non-events as well as specific extreme-weather events unjustifiably to humankind; to overstate the likely future course of climatic phenomena by several orders of magnitude – those are moral issues.



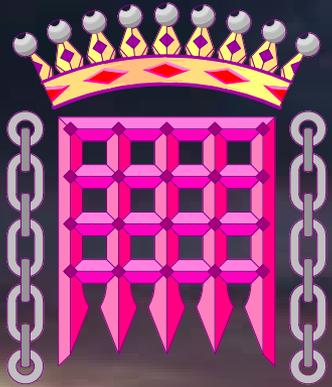
To propose unworkable solutions is a moral issue

To propose solutions to the non-problem of climate change that would cost many times more than the problem itself, if there were one; to advocate measures to mitigate climate change when adaptation would cost less and achieve more – those are moral issues.



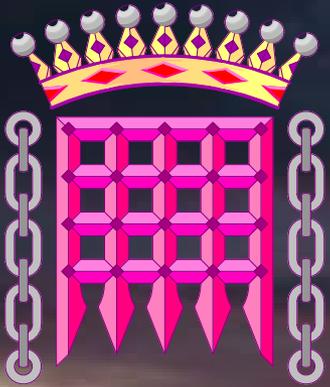
To favor narrow vested interests is a moral issue

To ignore the real problems of resource depletion, energy security, bad Third World government, organized terror, drugs, and fatal diseases that needlessly kill millions; to advance policies congenial to the short-term interest of some faction at the expense of the wider interest of us all – those are moral issues.



To inflict bad policies on the poor is a moral issue

Above all, to inflict upon the nations of the world a policy calculated to condemn the very poorest to remain imprisoned in poverty forever, and to die unheeded in their tens of millions for want of the light and heat and power which we take for granted – that is a moral issue.



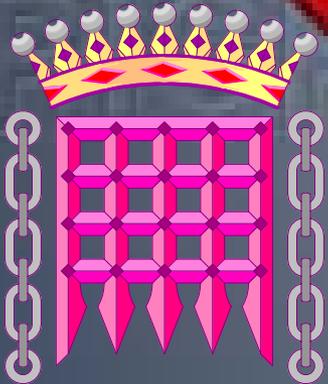
Get the science right – or get the policy wrong

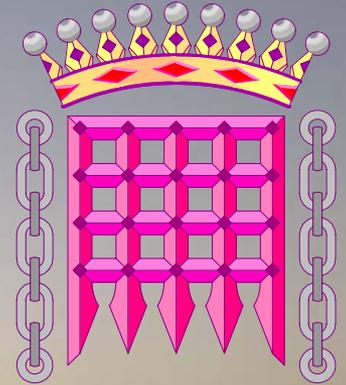
The suffering children of Africa, Asia and South America, imploring us with their hopeless, hopeful eyes, are our people. They cannot look to their own. They look to us.

We must get the science right or we will get the policy wrong. We have failed them and failed them before.

We must not fail them again.







**OMNIS SPIRITVS
LAVDET DOMINVM**

