

A satellite view of Earth showing the Arctic region with significant ice cover. The image is centered on the North Pole, showing the Arctic Ocean and surrounding landmasses. A semi-transparent white banner is overlaid across the middle of the image.

Deel 2: IJs en Klimaat

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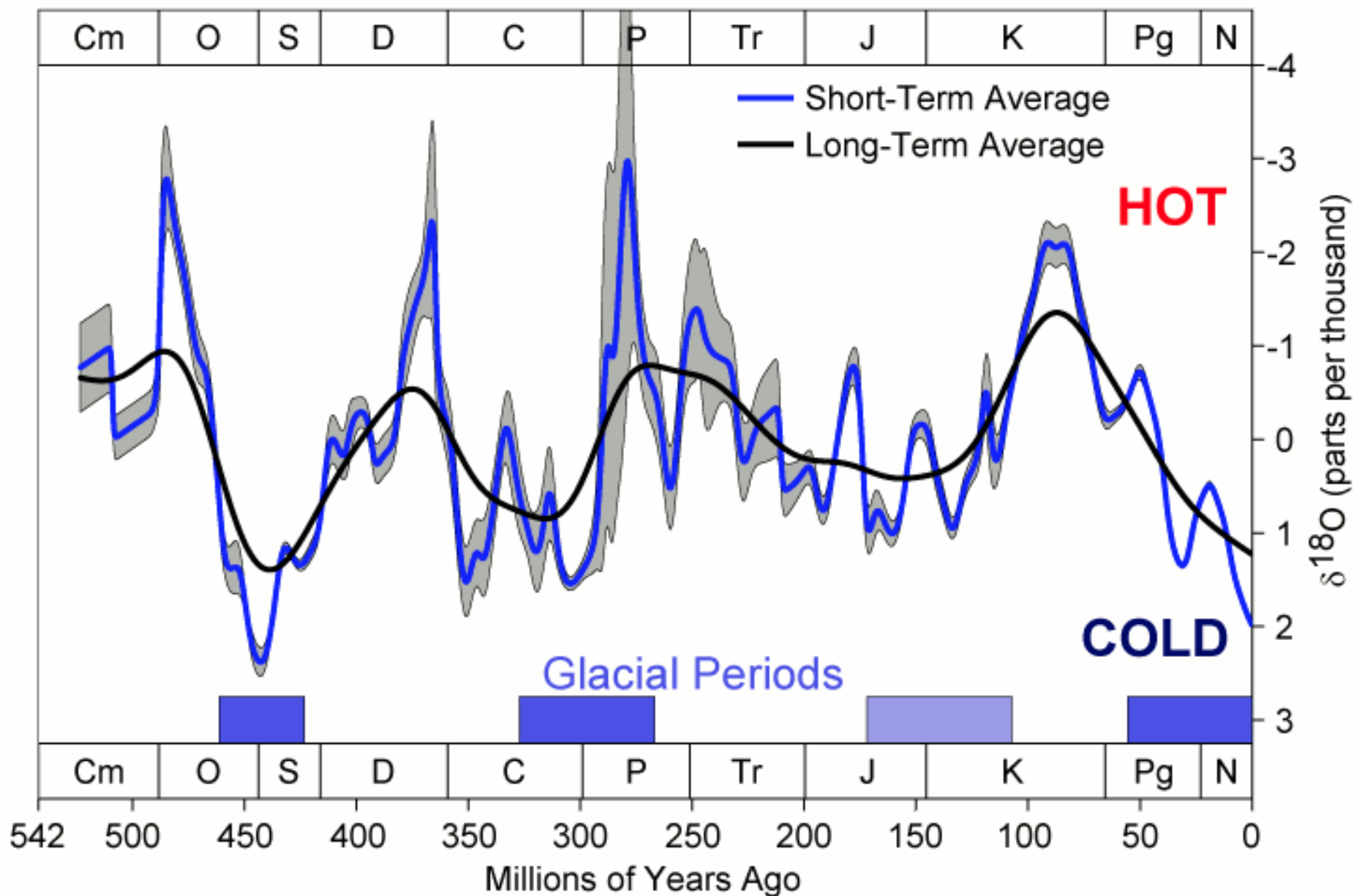


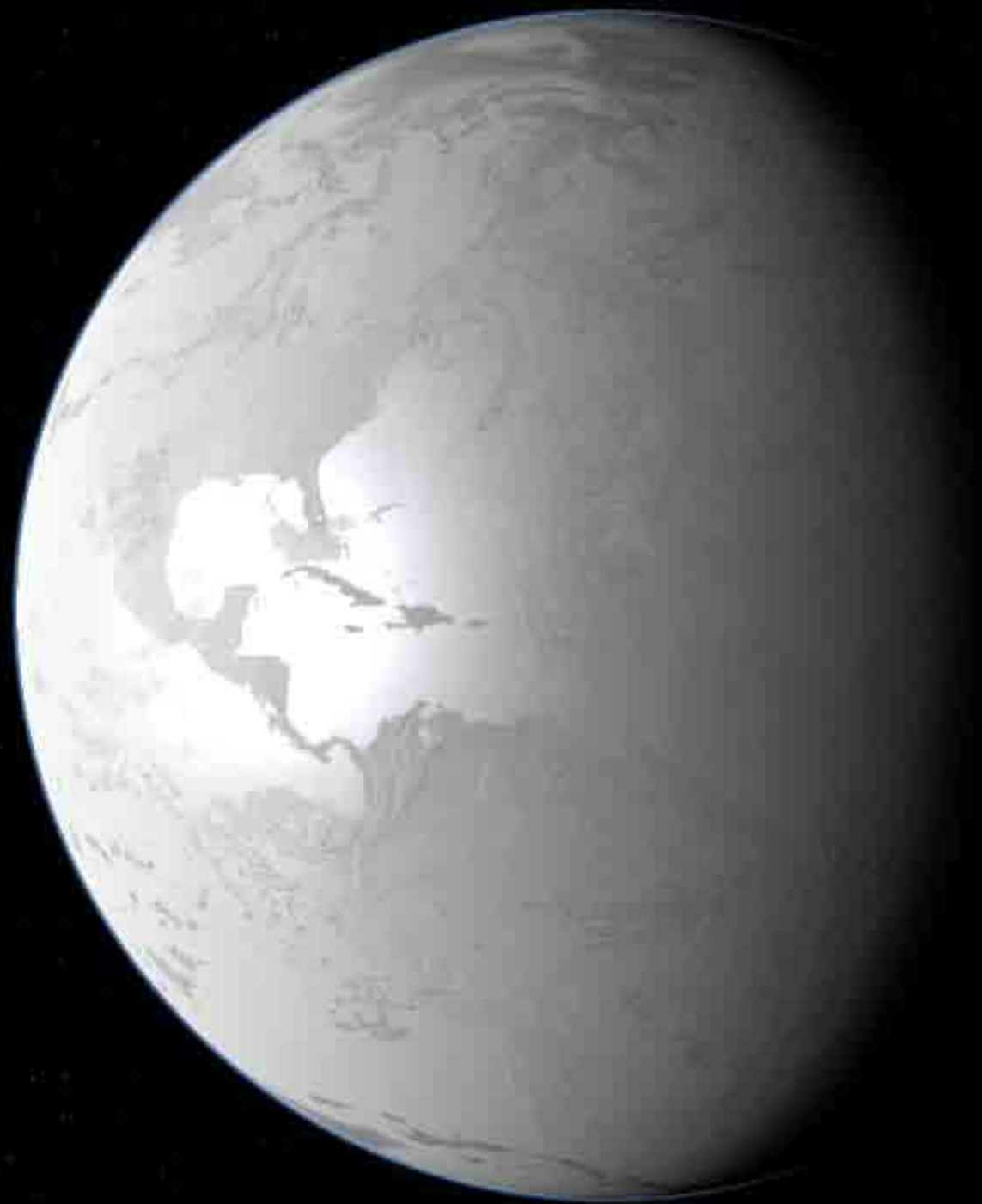
Antarctica
24,700,000 km³
56 m

Groenland
2,900,000 km³
7.3 m

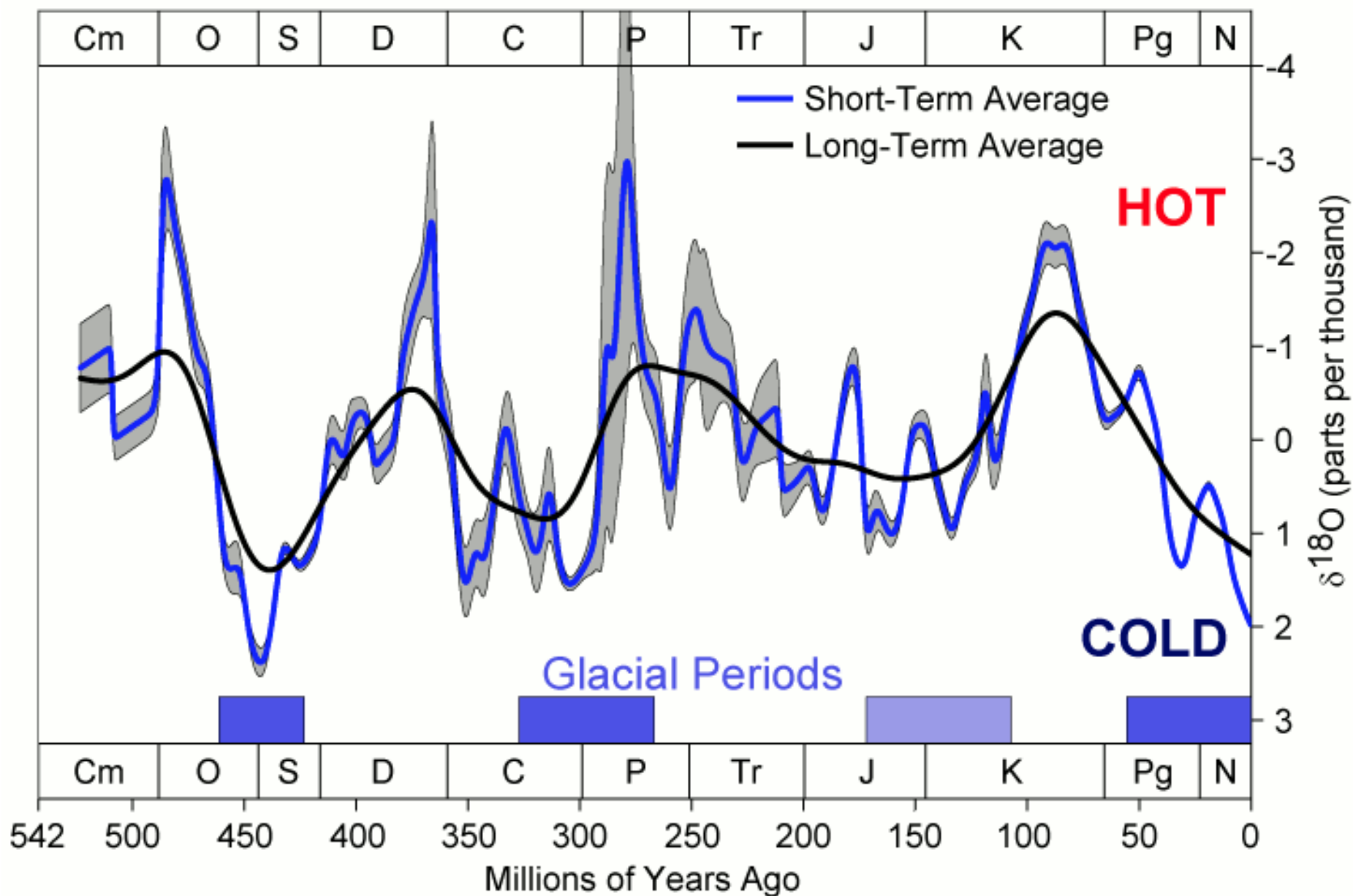
Alle gletsjers
90,000 km³ ?
0.3 m

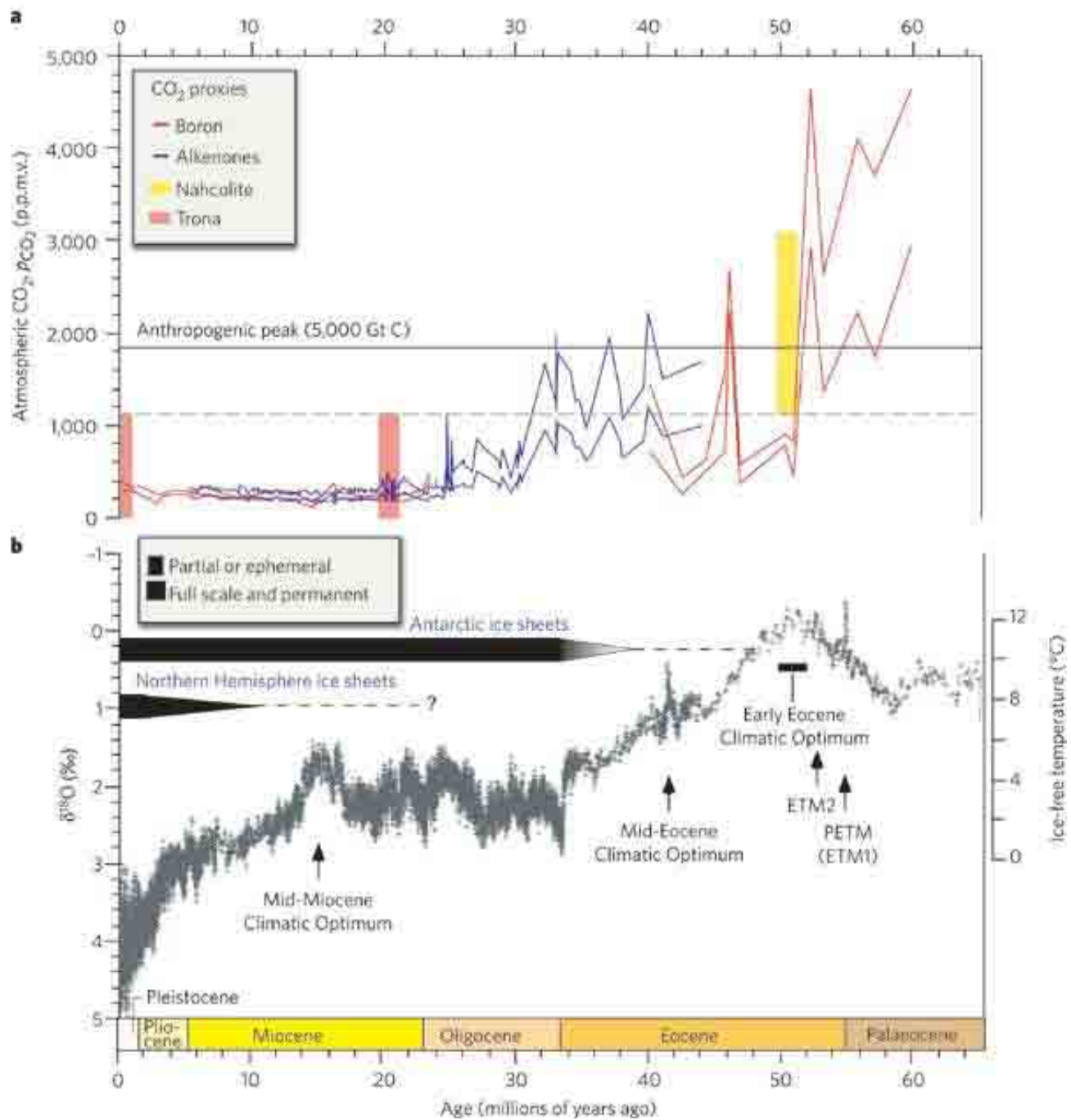
Phanerozoic Climate Change



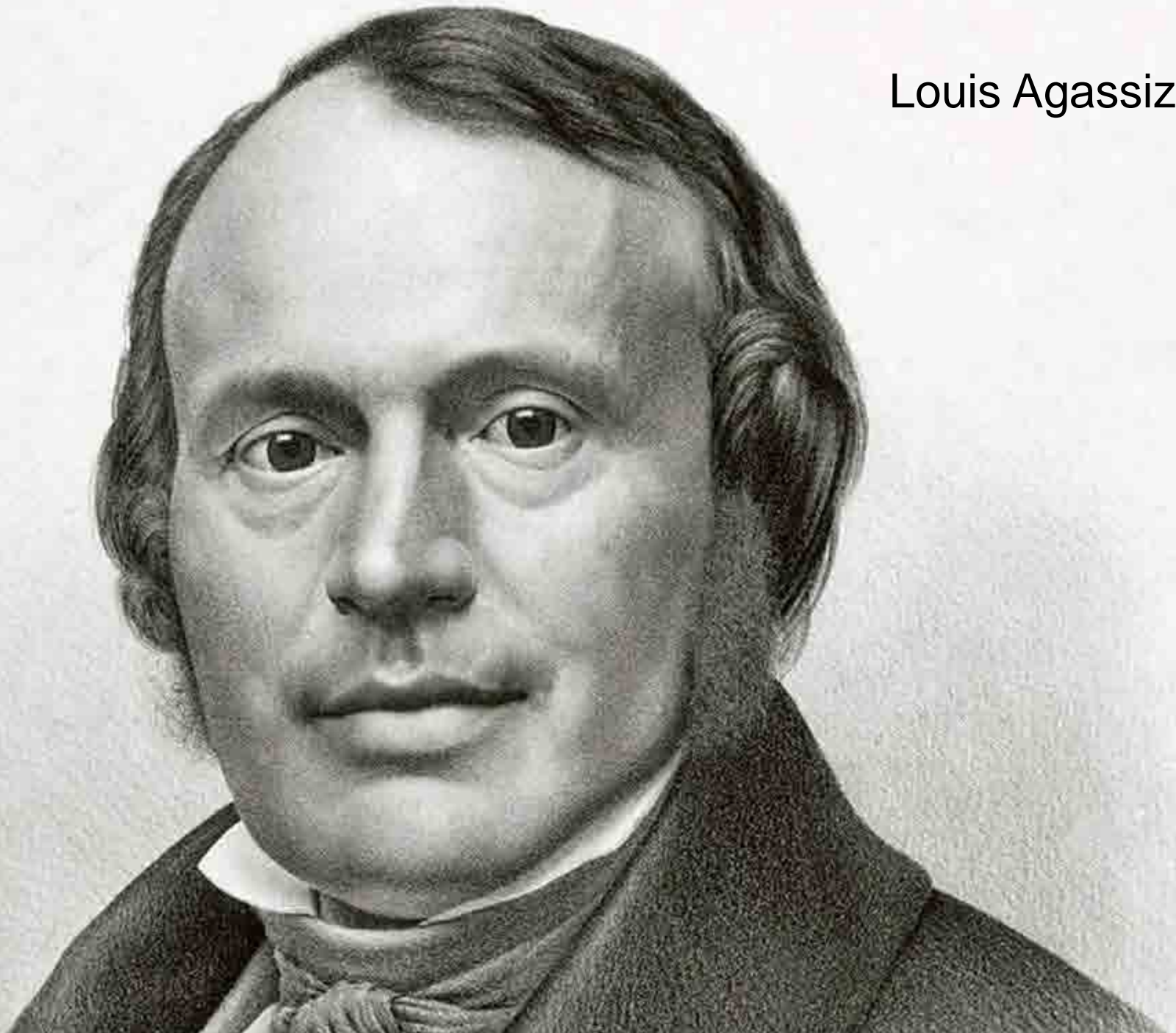


Phanerozoic Climate Change

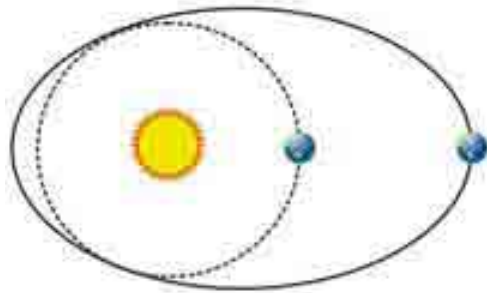




Louis Agassiz



Milankovitch Cycles



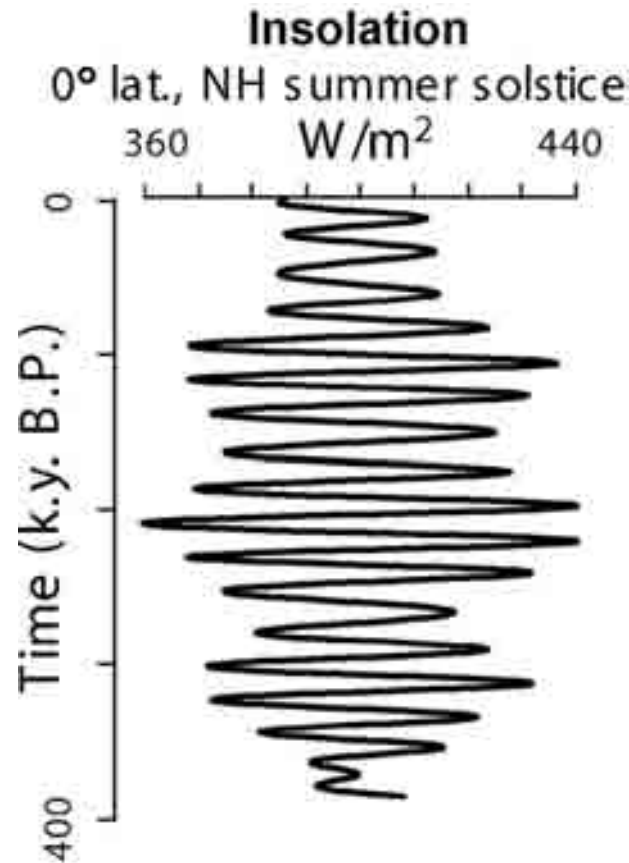
Eccentricity

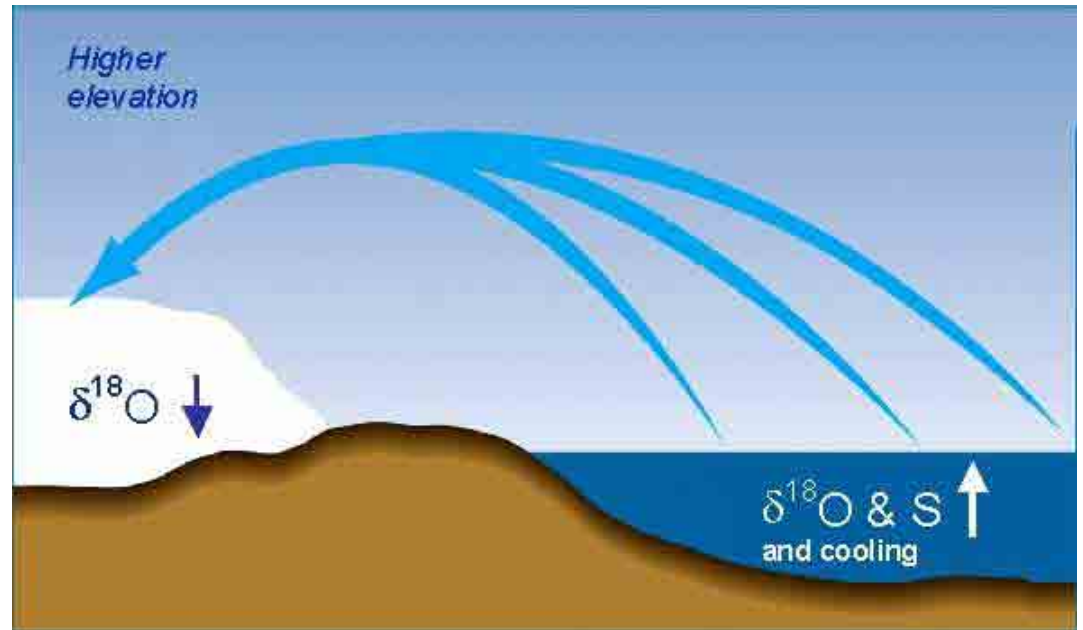
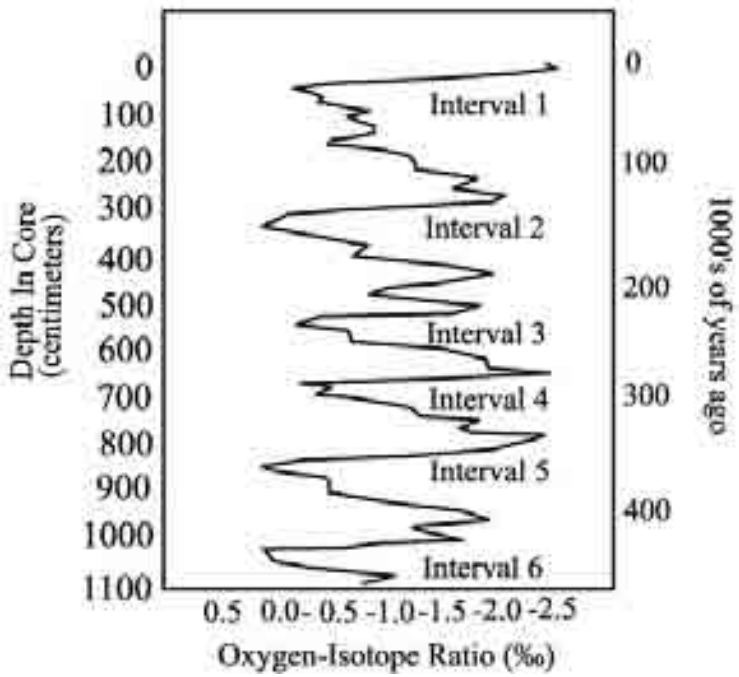


Obliquity

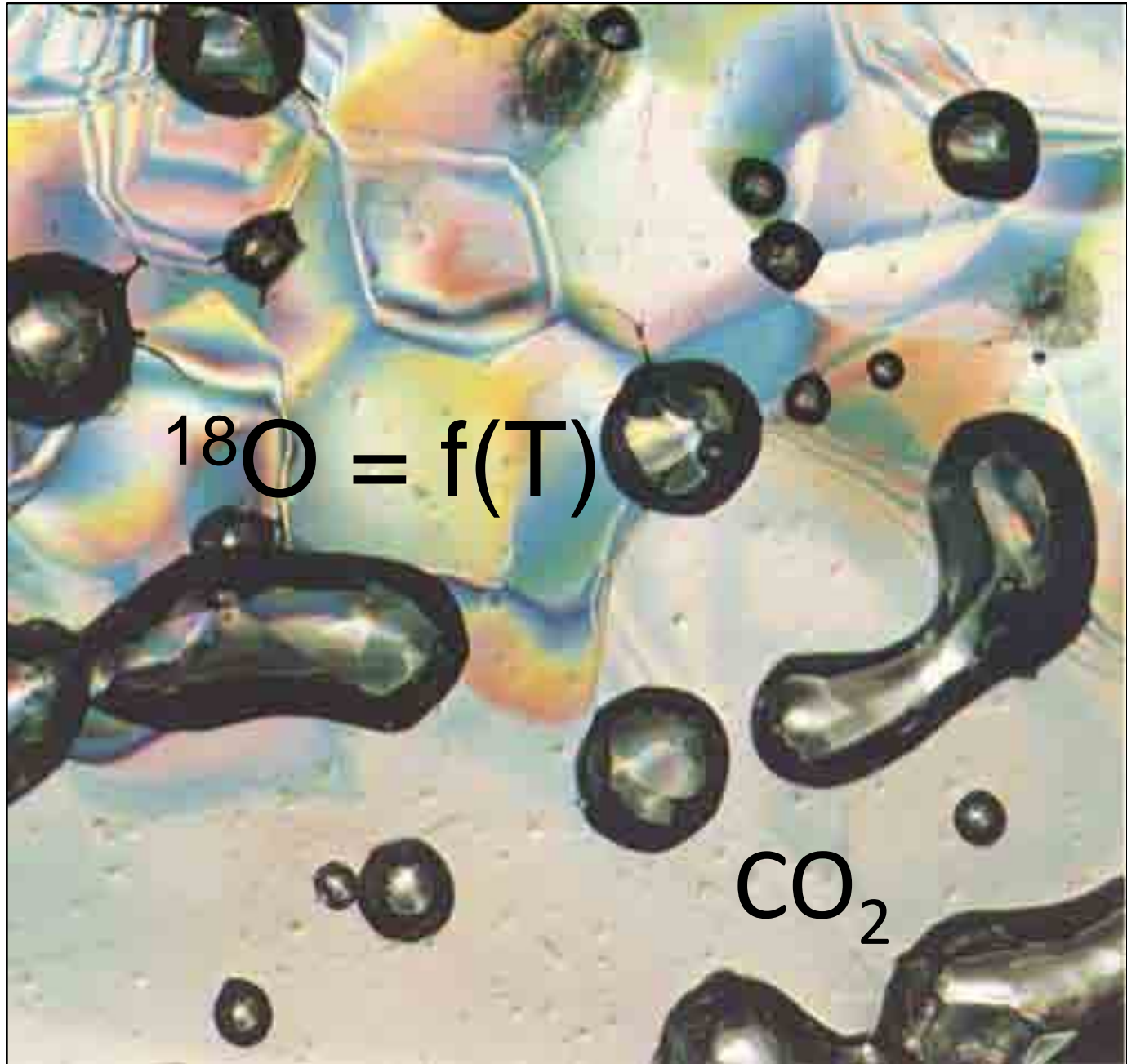


Precession





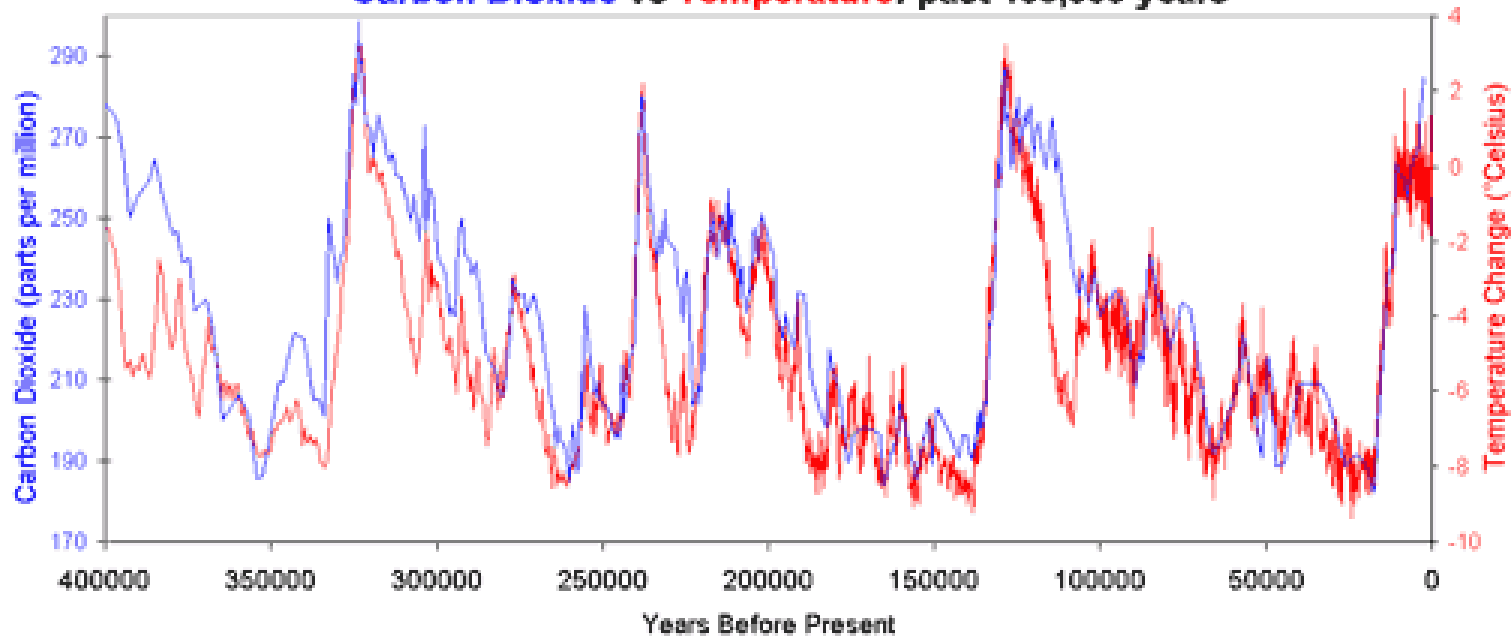




$$^{18}\text{O} = f(T)$$

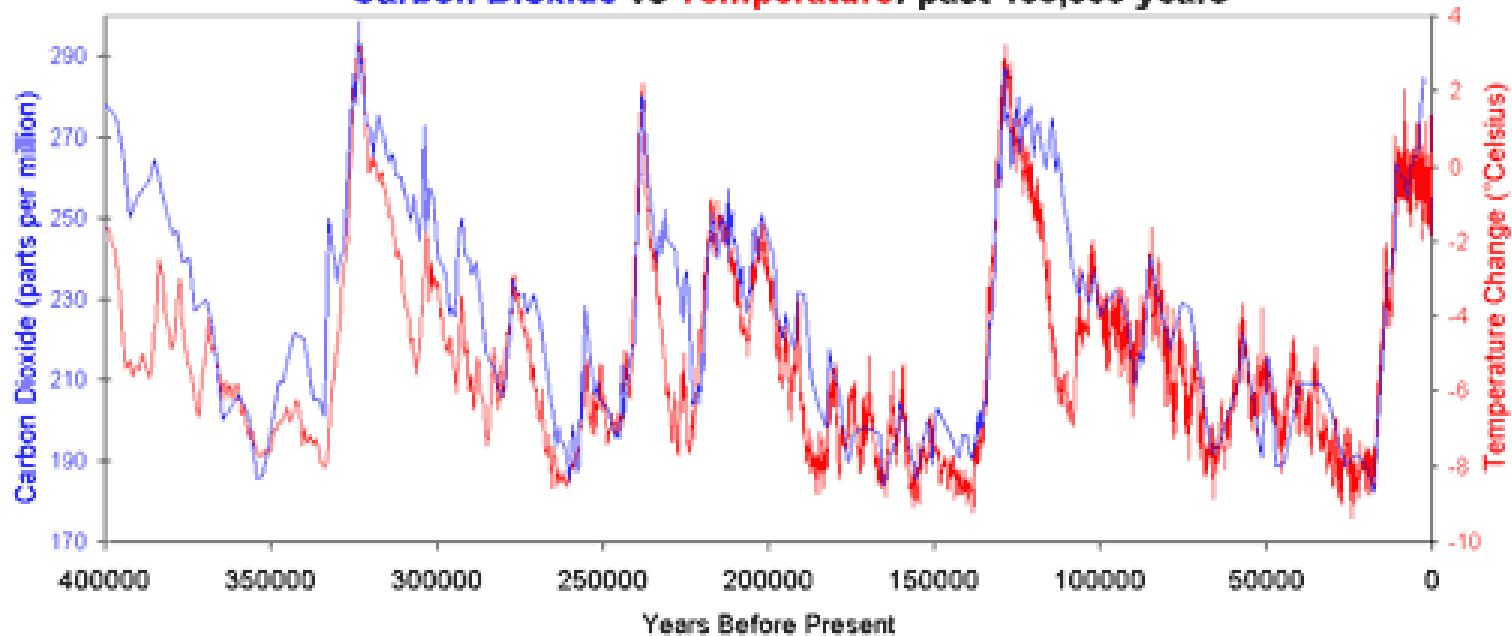
CO_2

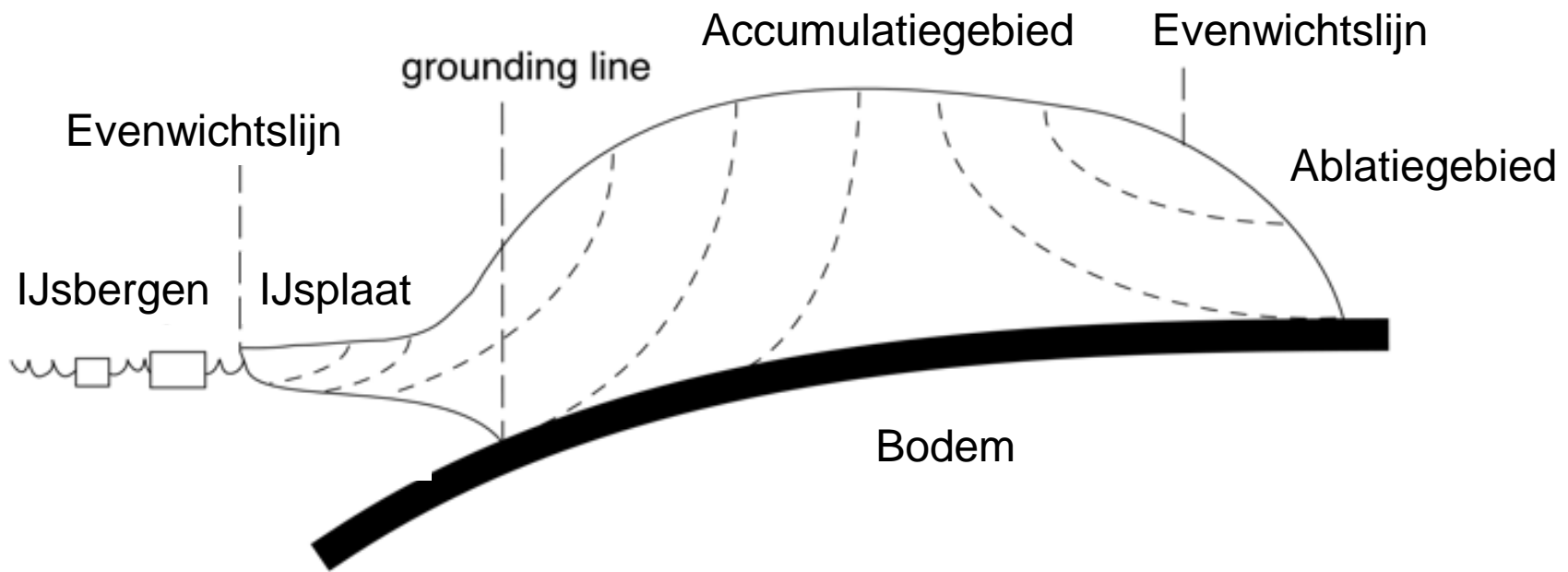
Carbon Dioxide vs Temperature: past 400,000 years





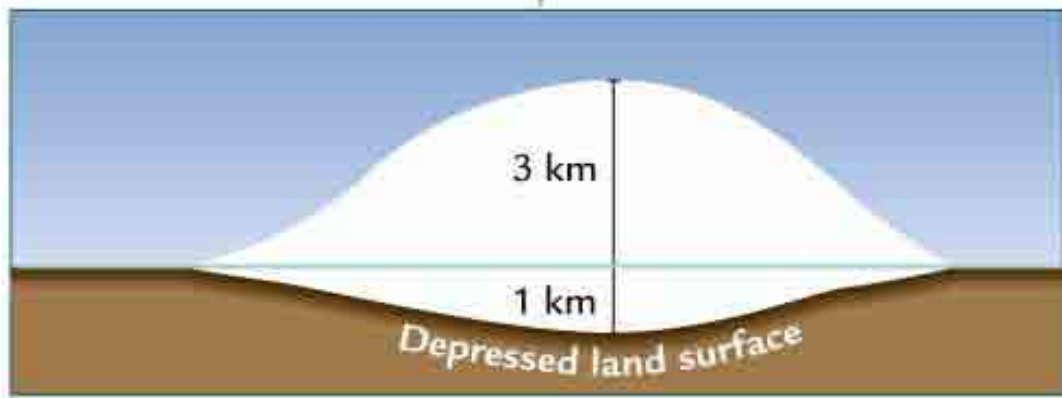
Carbon Dioxide vs Temperature: past 400,000 years



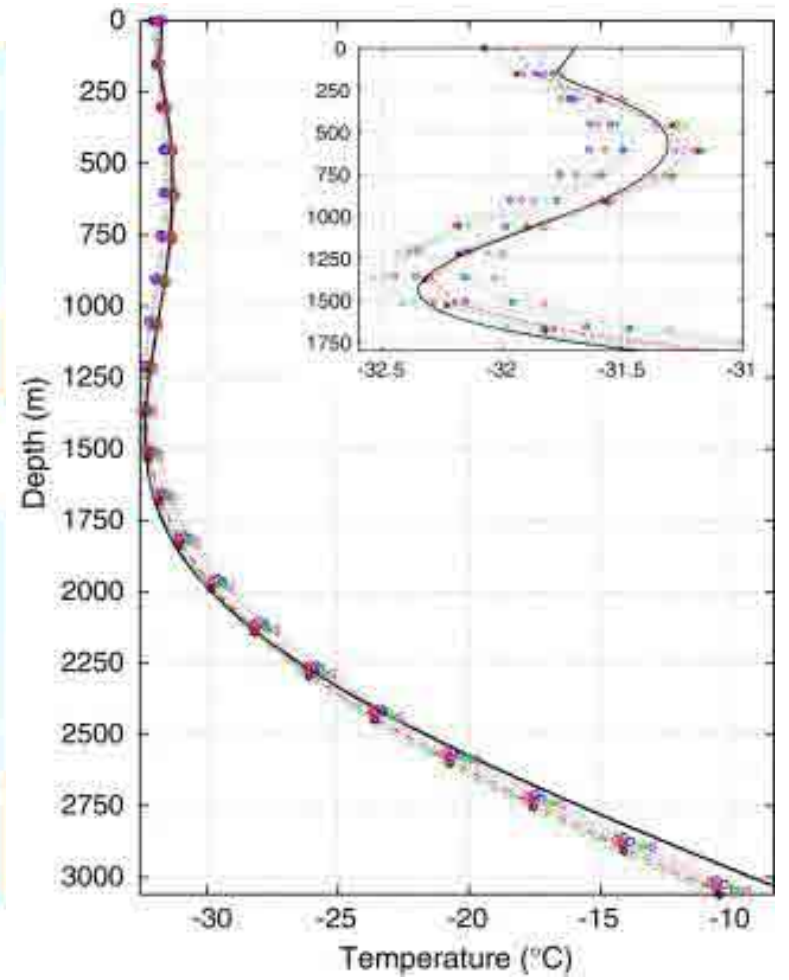




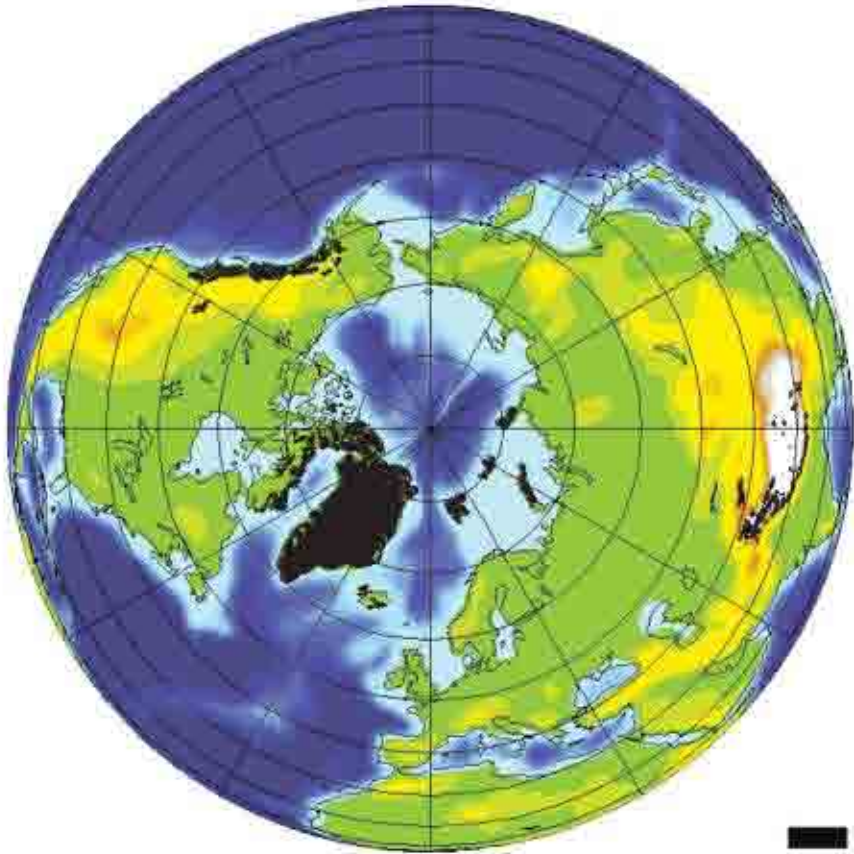
20,000 years later



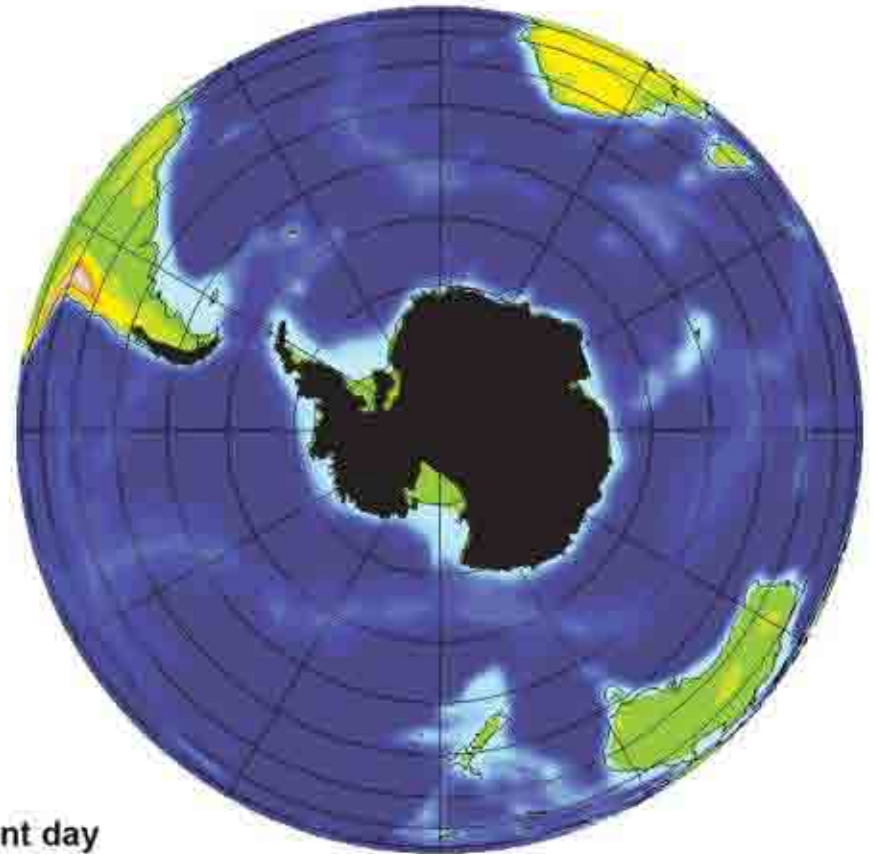
A



NH ice coverage

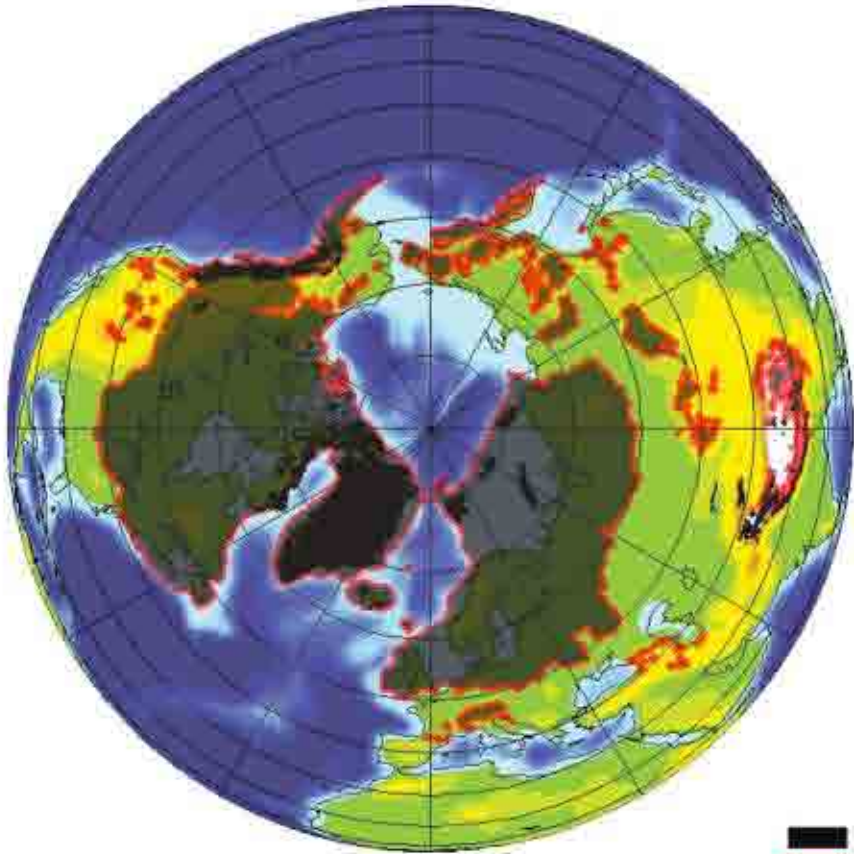


SH ice coverage

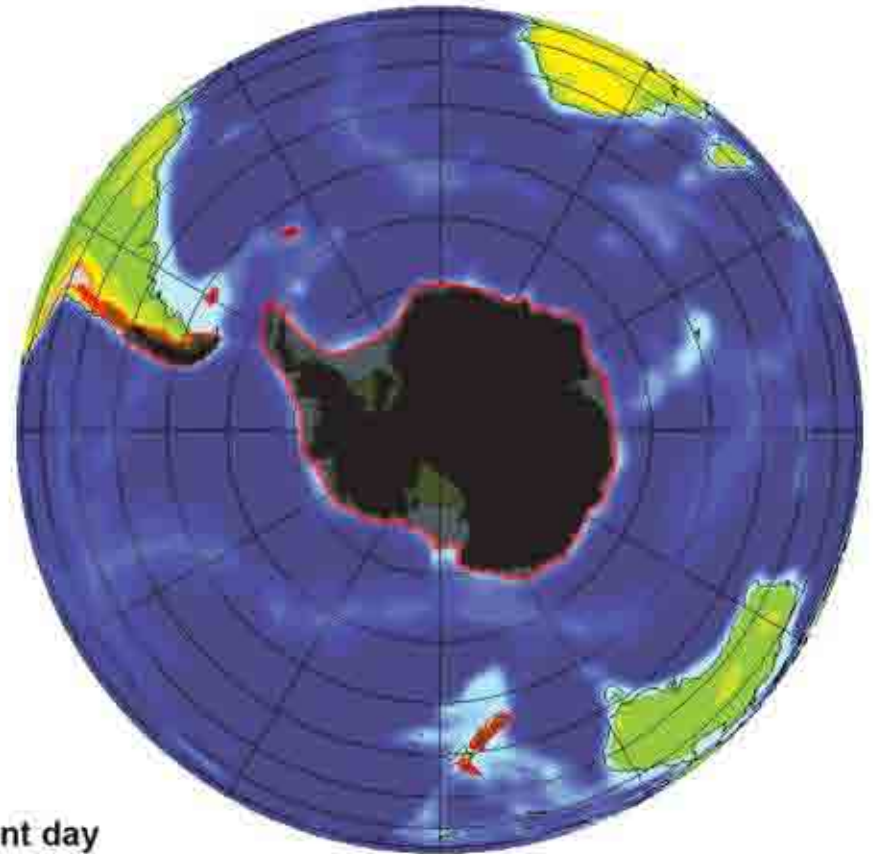


■ present day

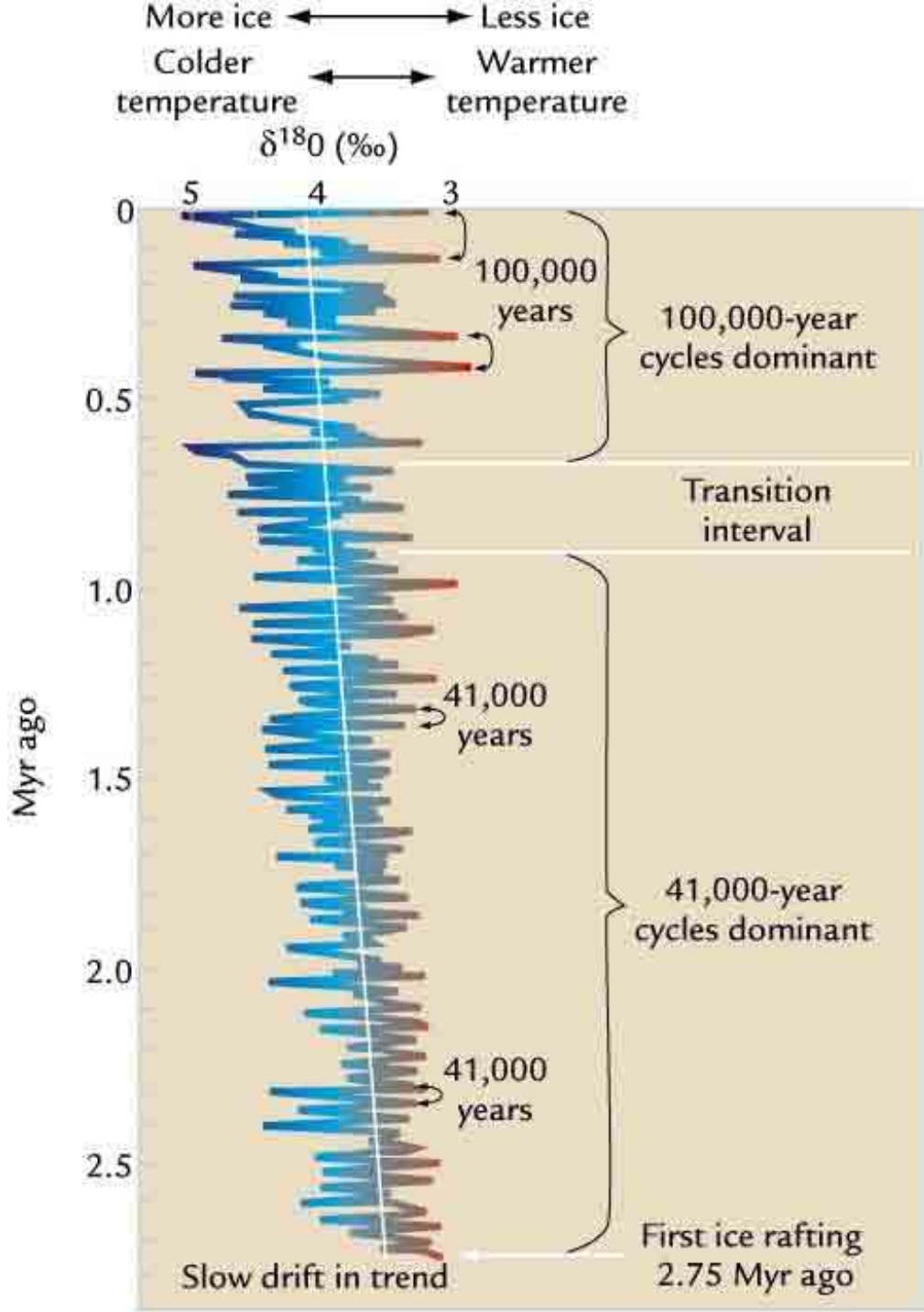
NH ice coverage

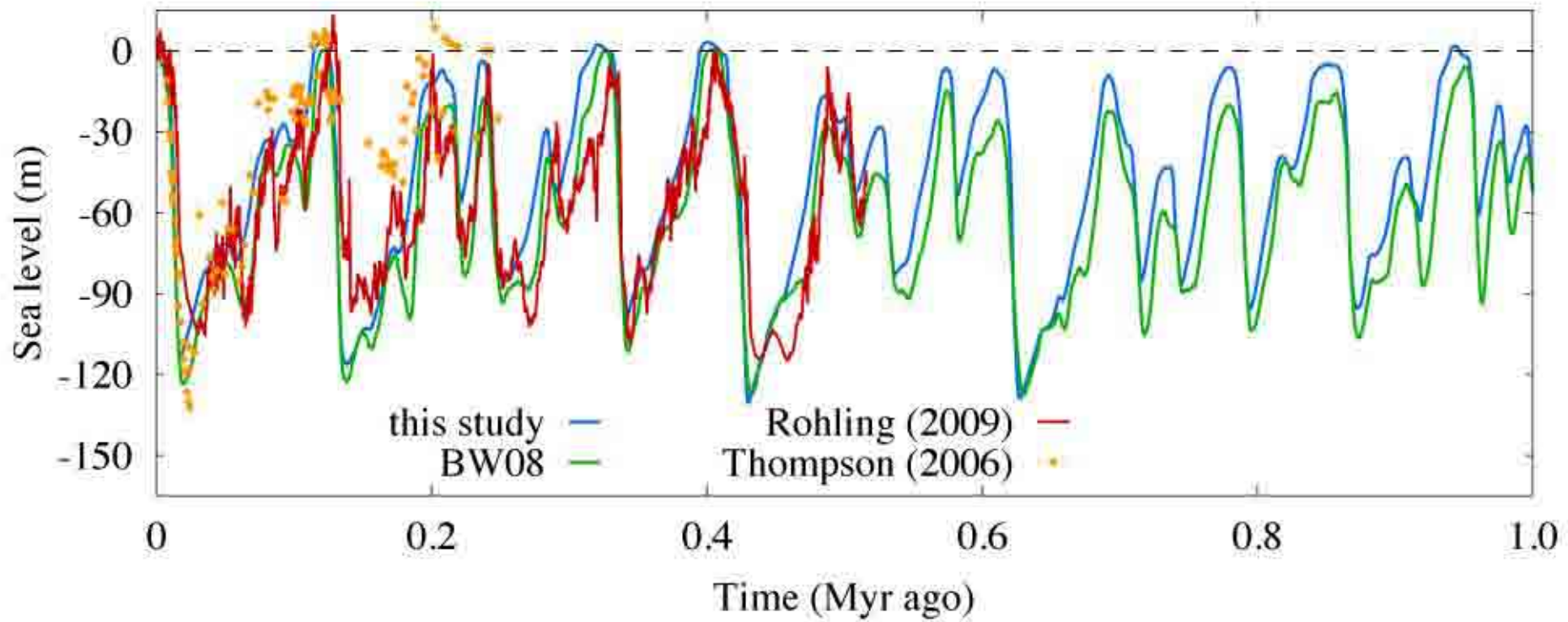


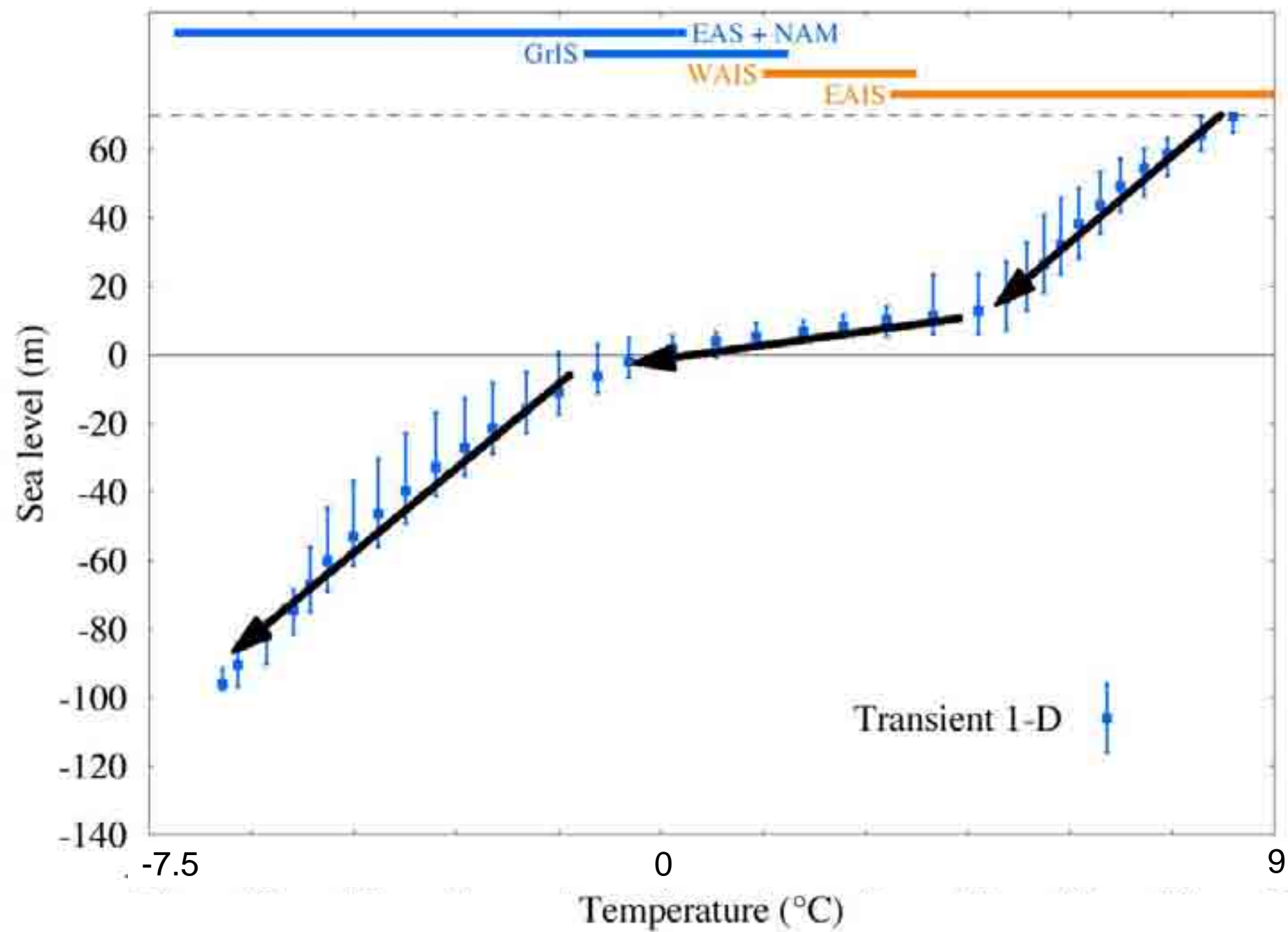
SH ice coverage

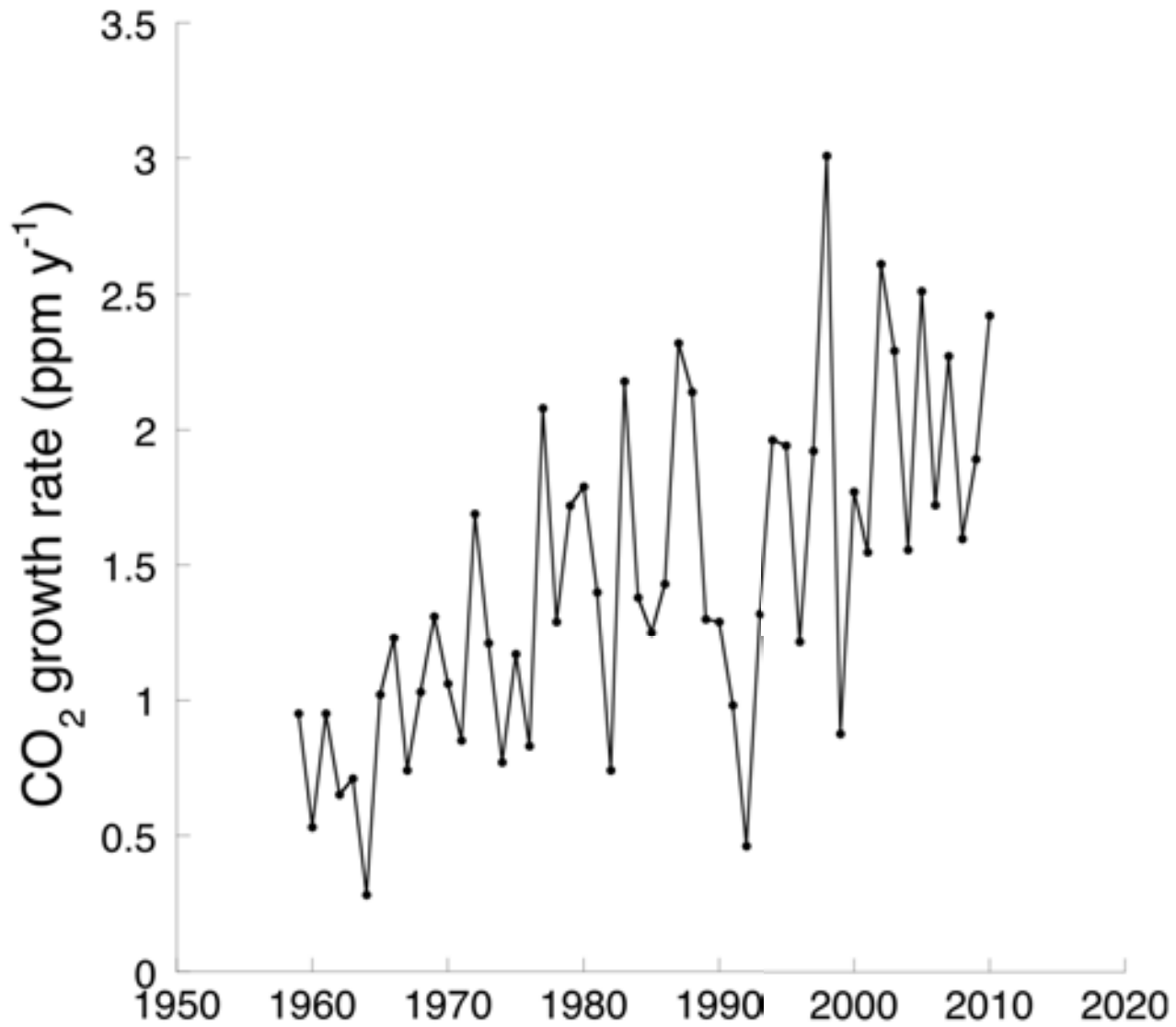


■ present day
■ glacial maximum

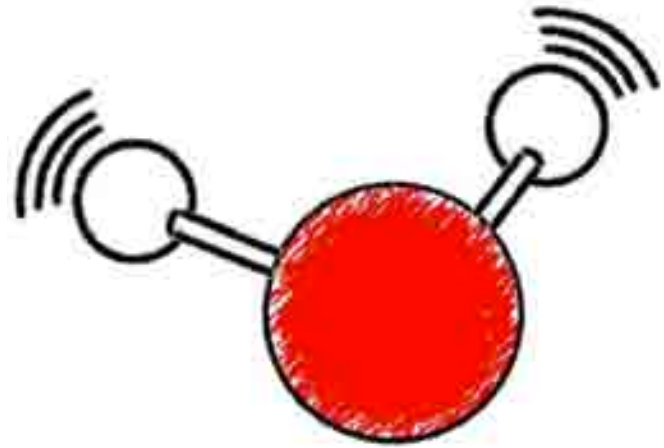


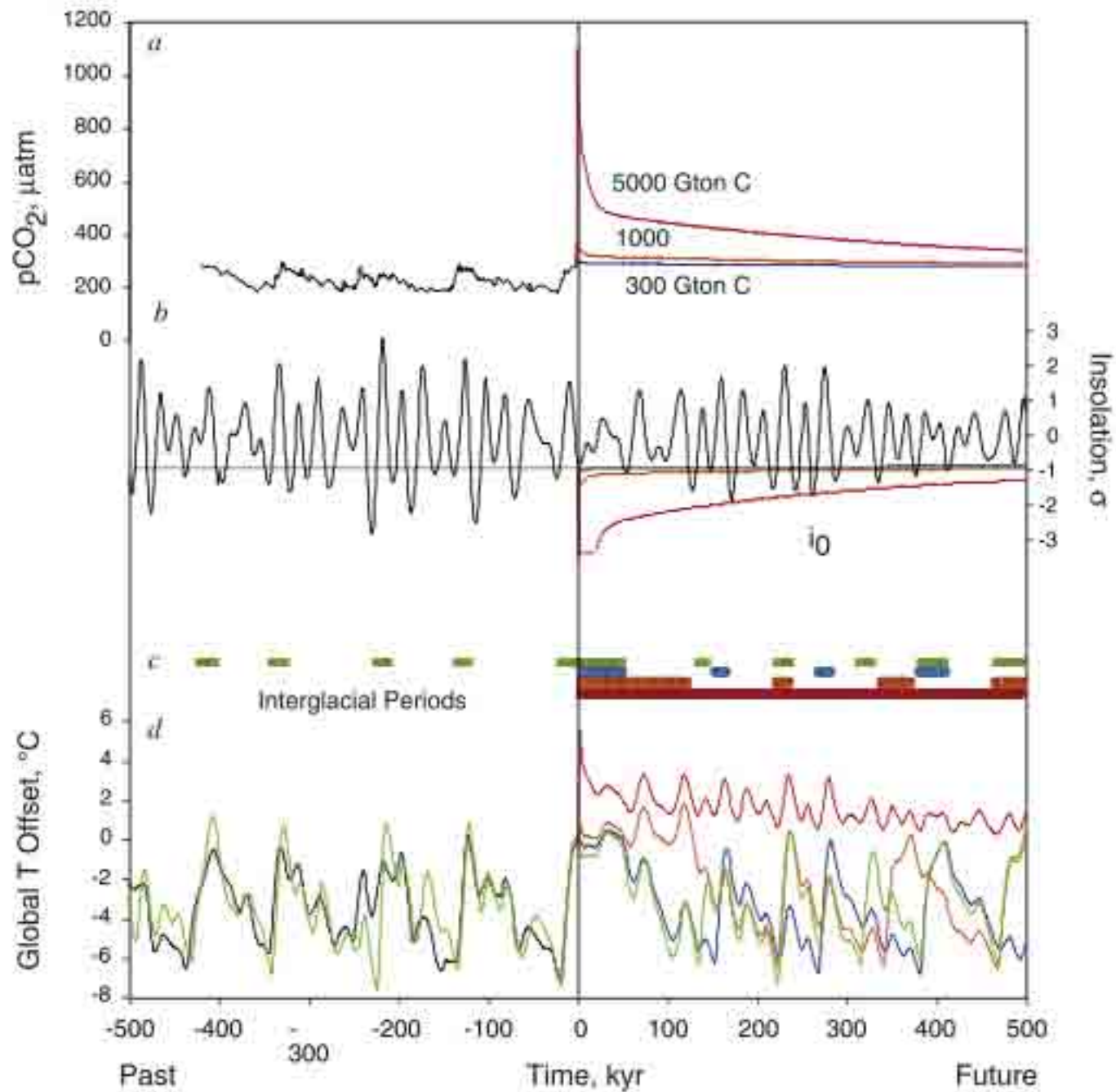


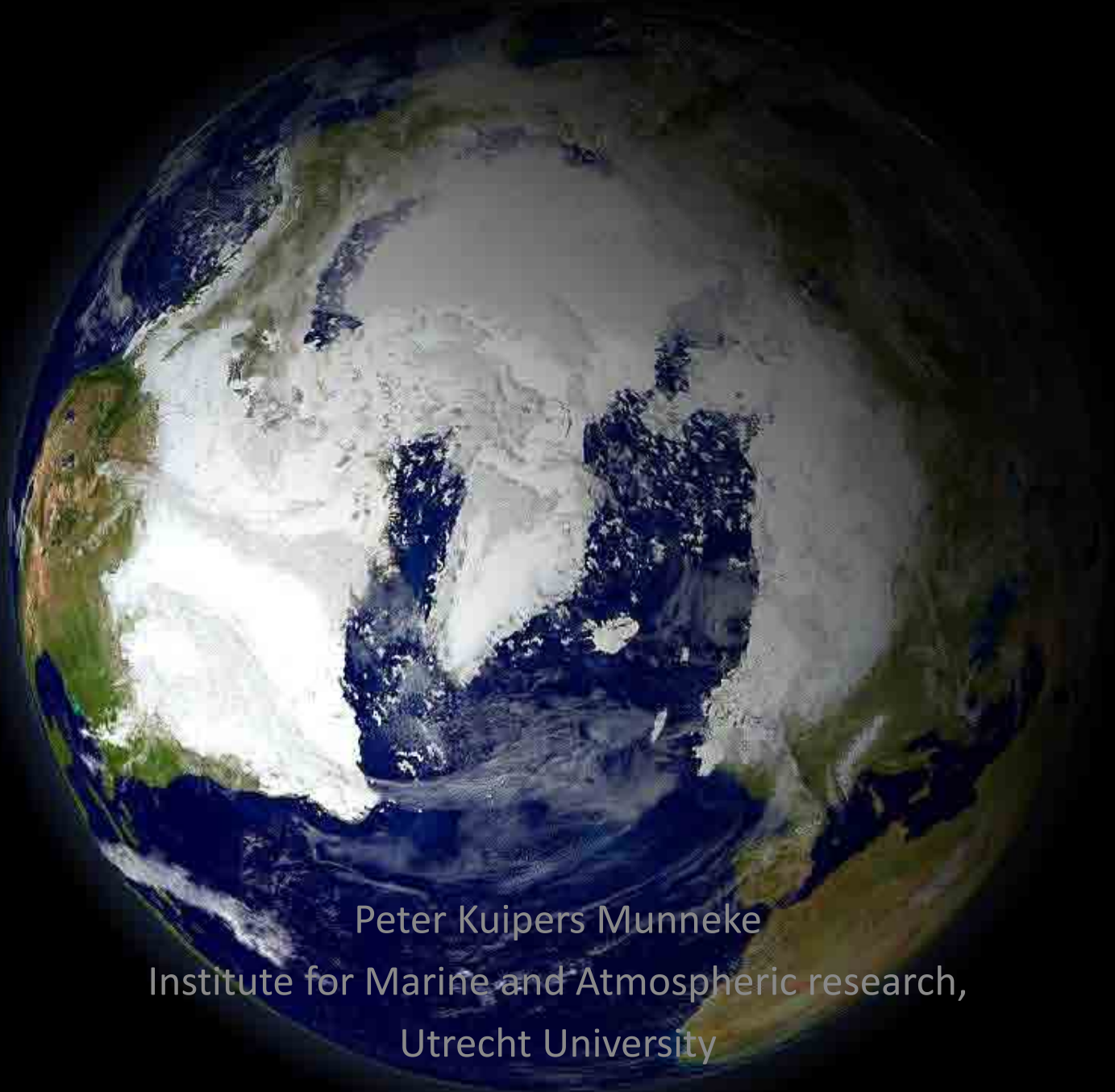




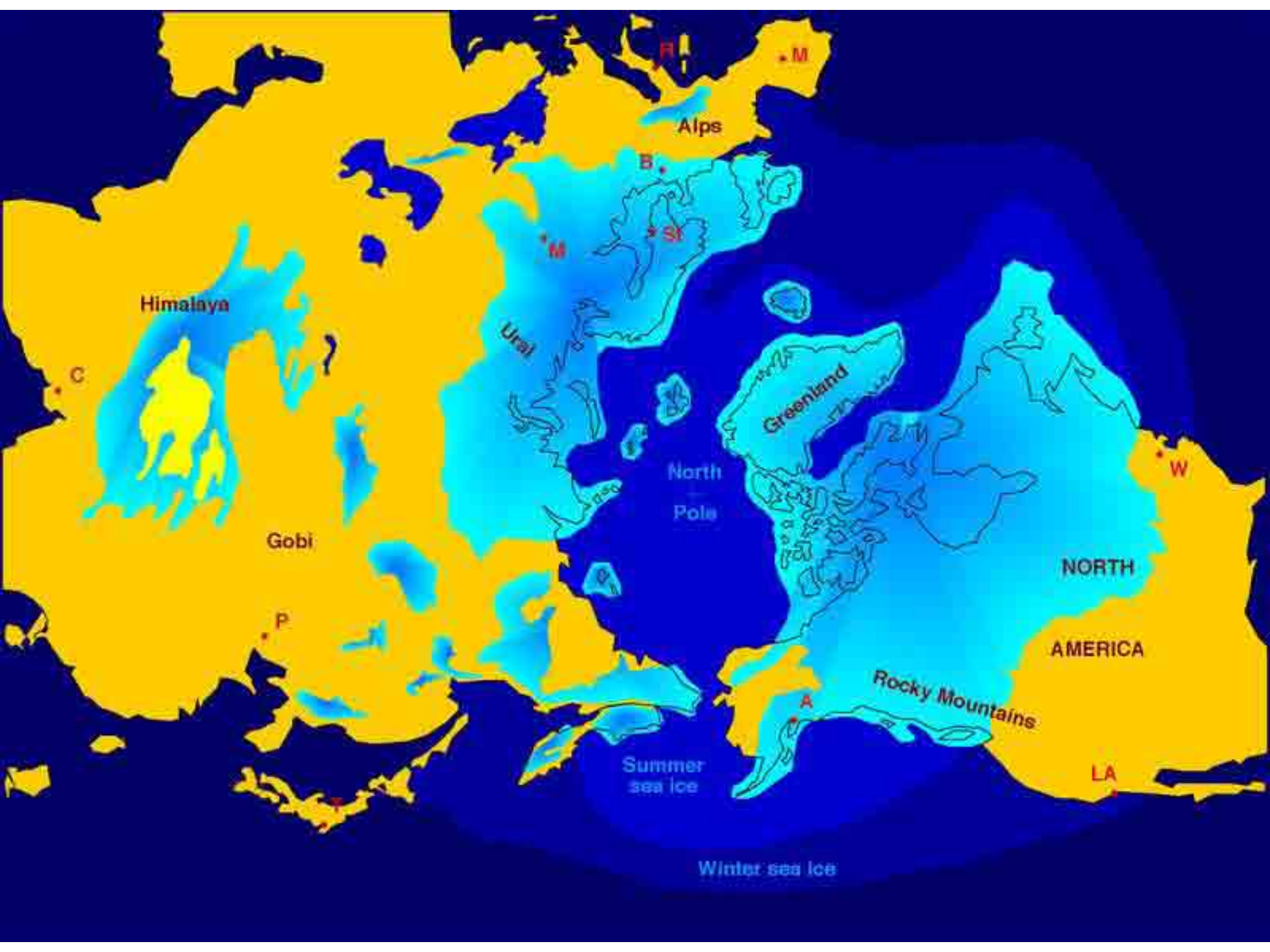
Growth rate during last deglaciation: 0.007 ppm per year







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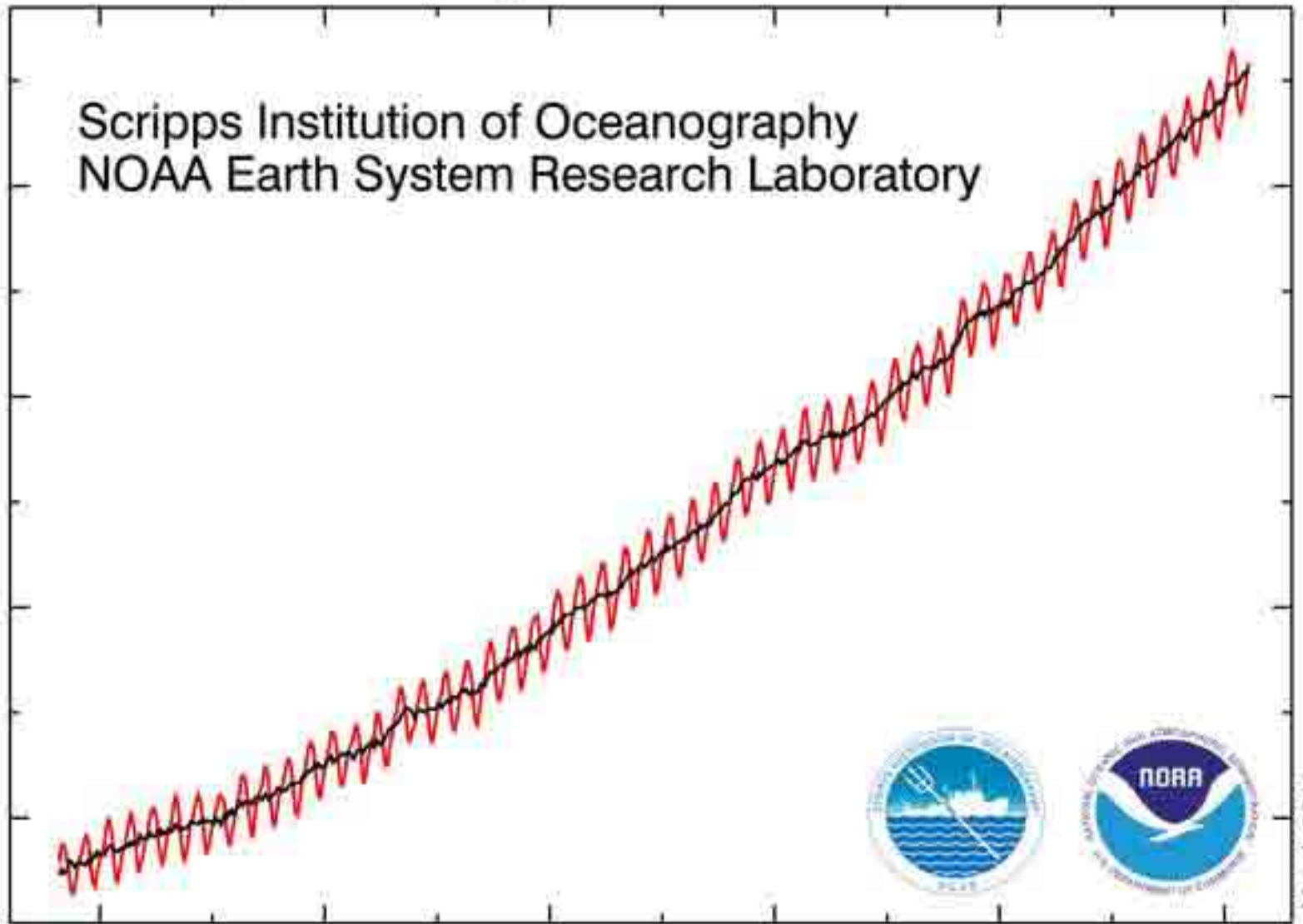


Atmospheric CO₂ at Mauna Loa Observatory

Scripps Institution of Oceanography
NOAA Earth System Research Laboratory

PARTS PER MILLION

380
360
340
320



1960

1970

1980

1990

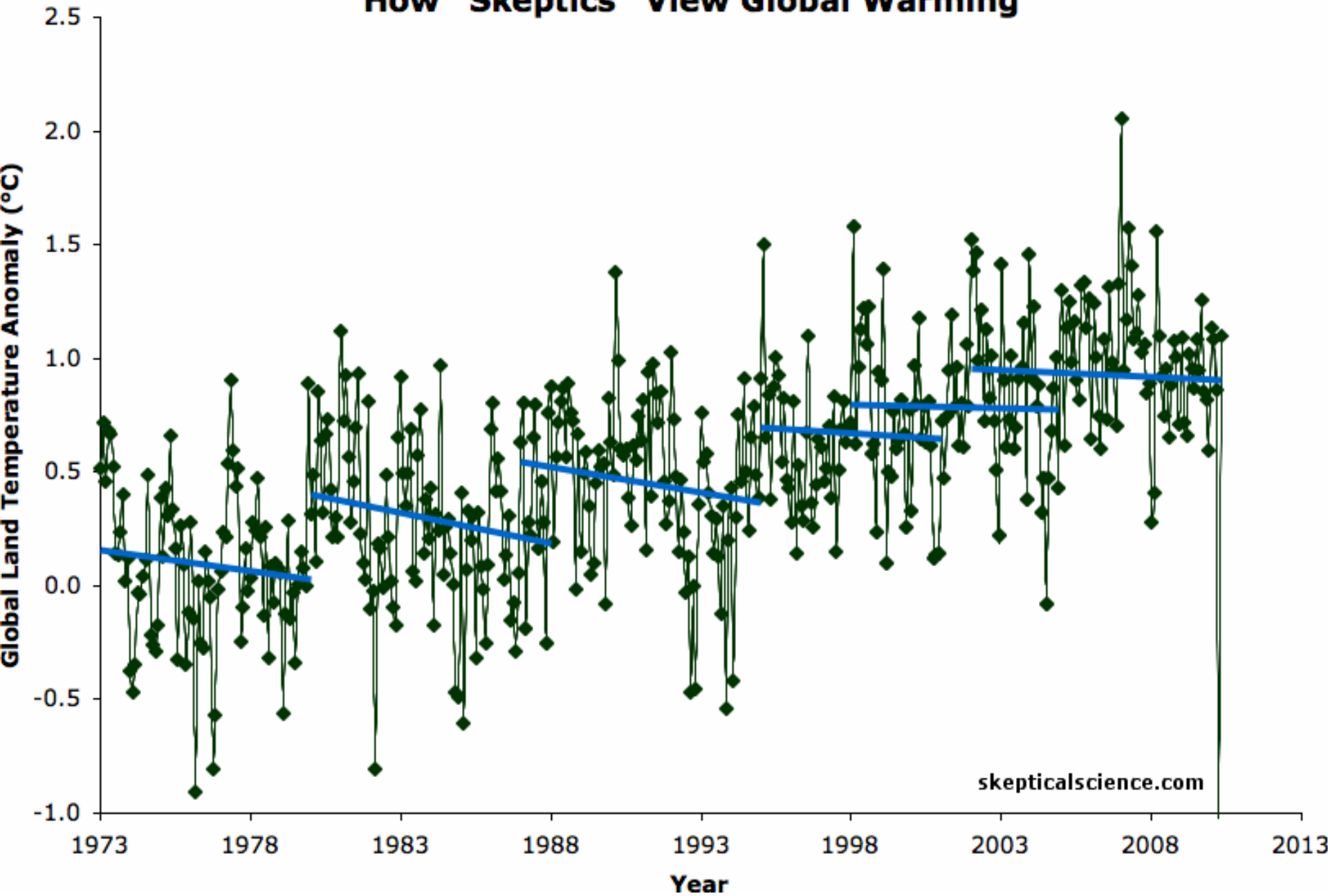
2000

2010

YEAR

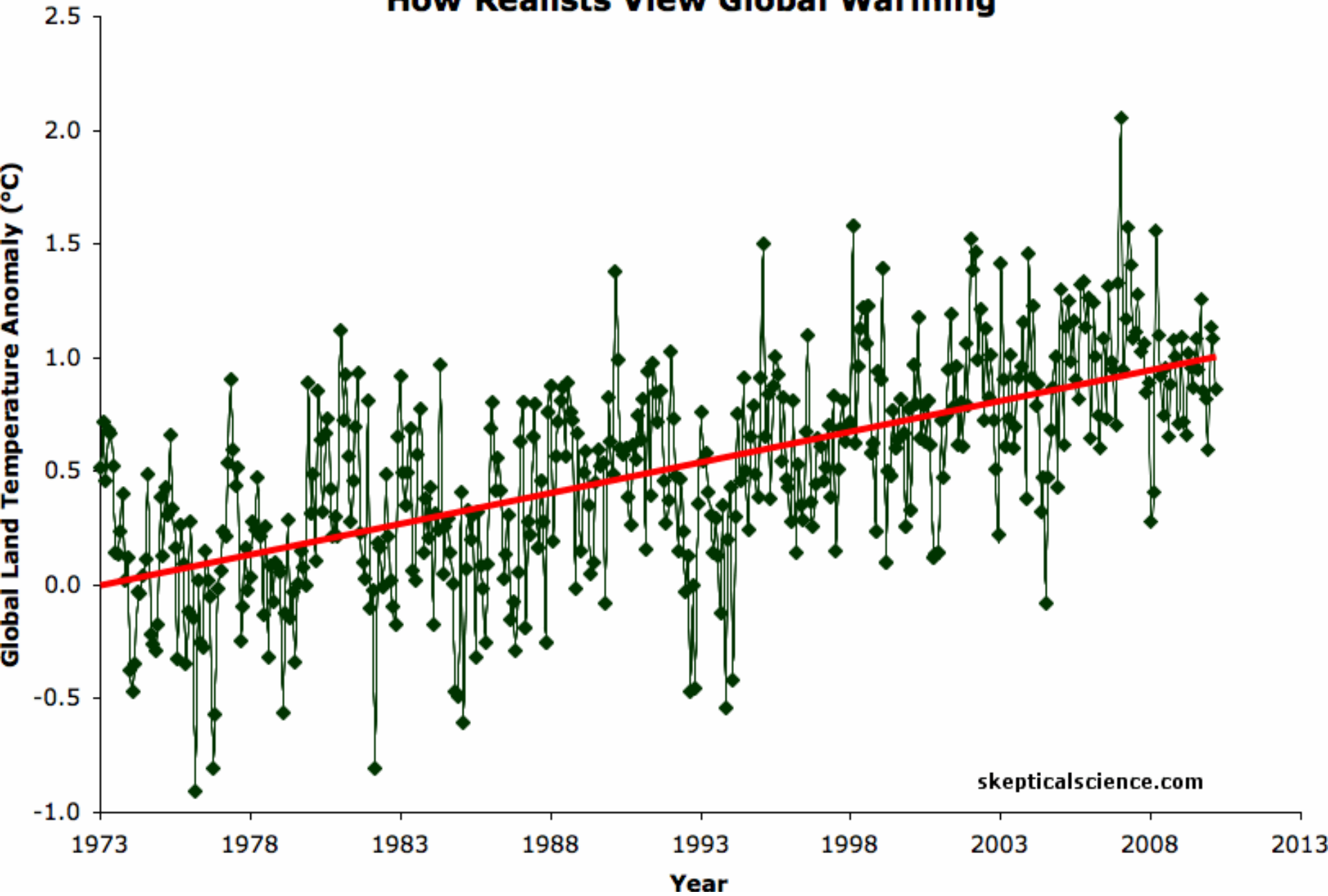
March 2011

How "Skeptics" View Global Warming

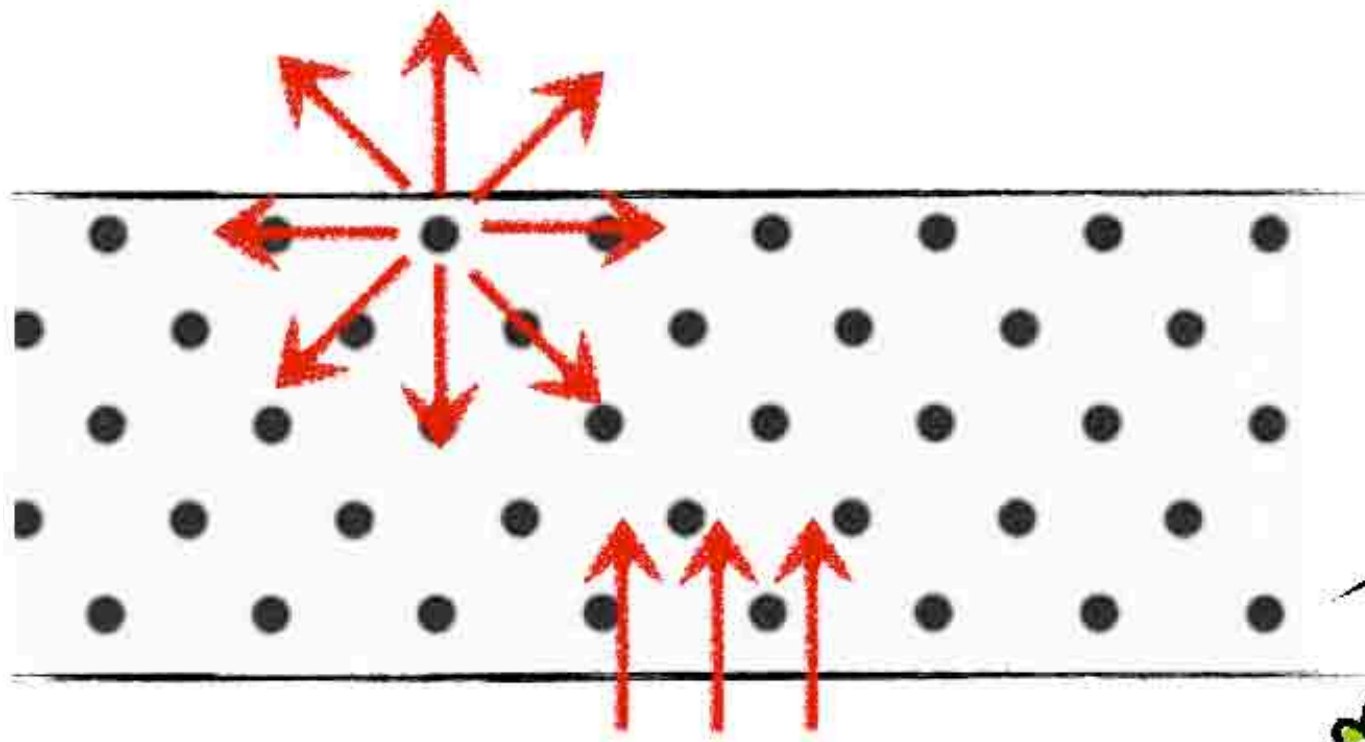
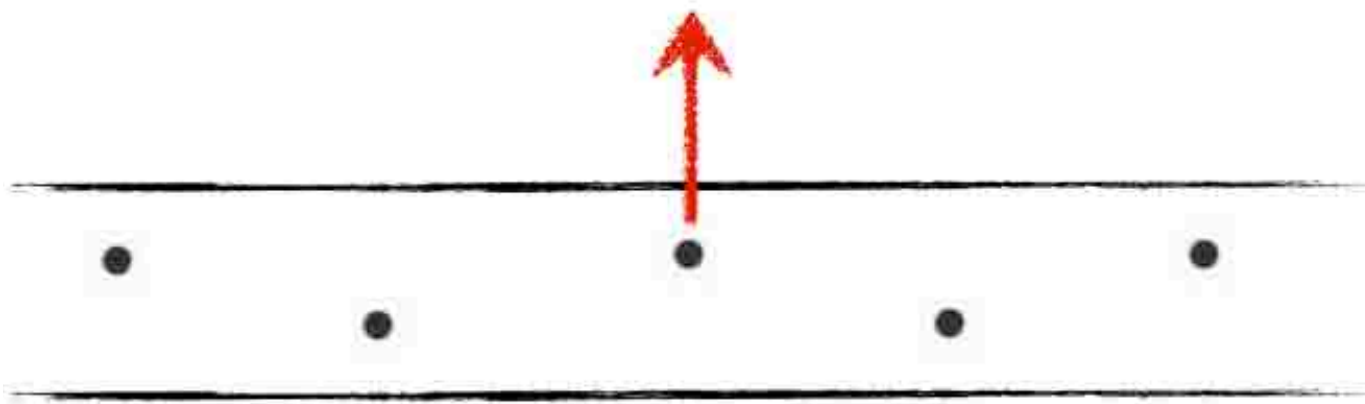


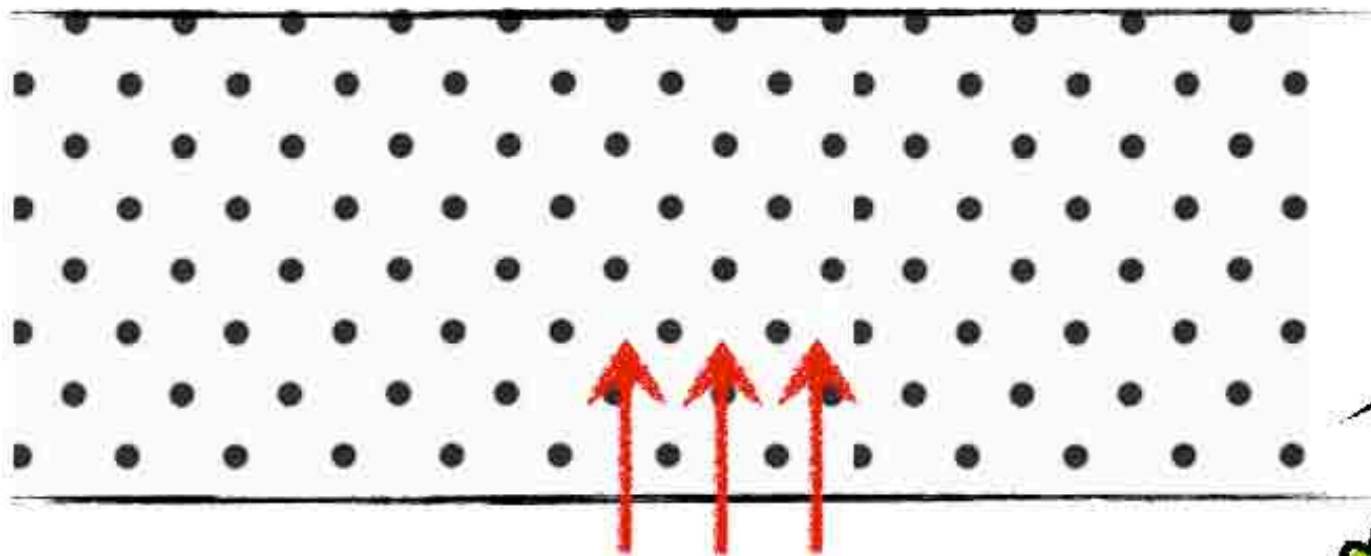
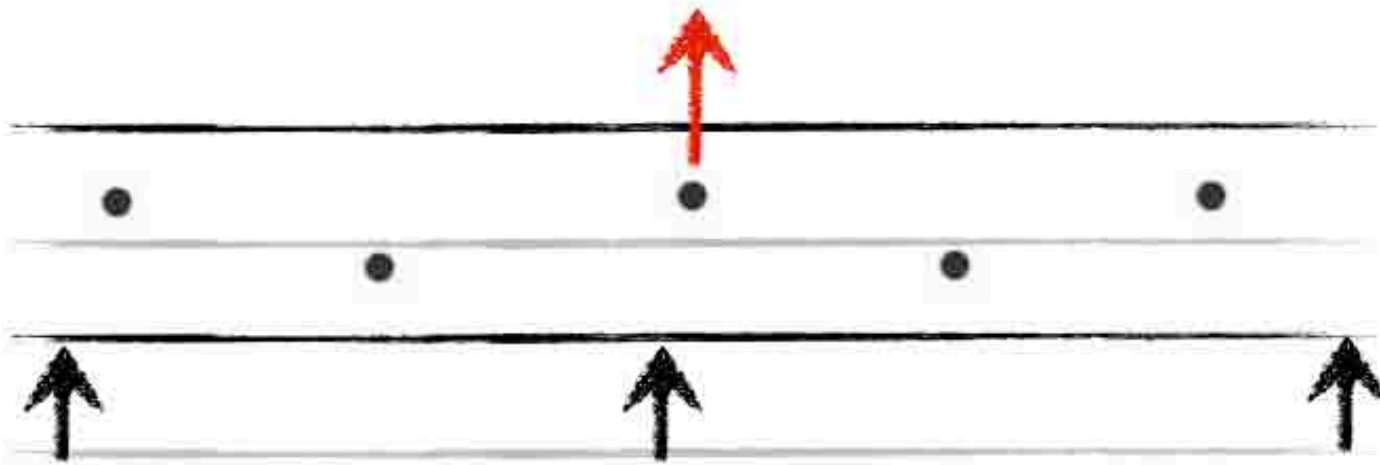
skepticalscience.com

How Realists View Global Warming

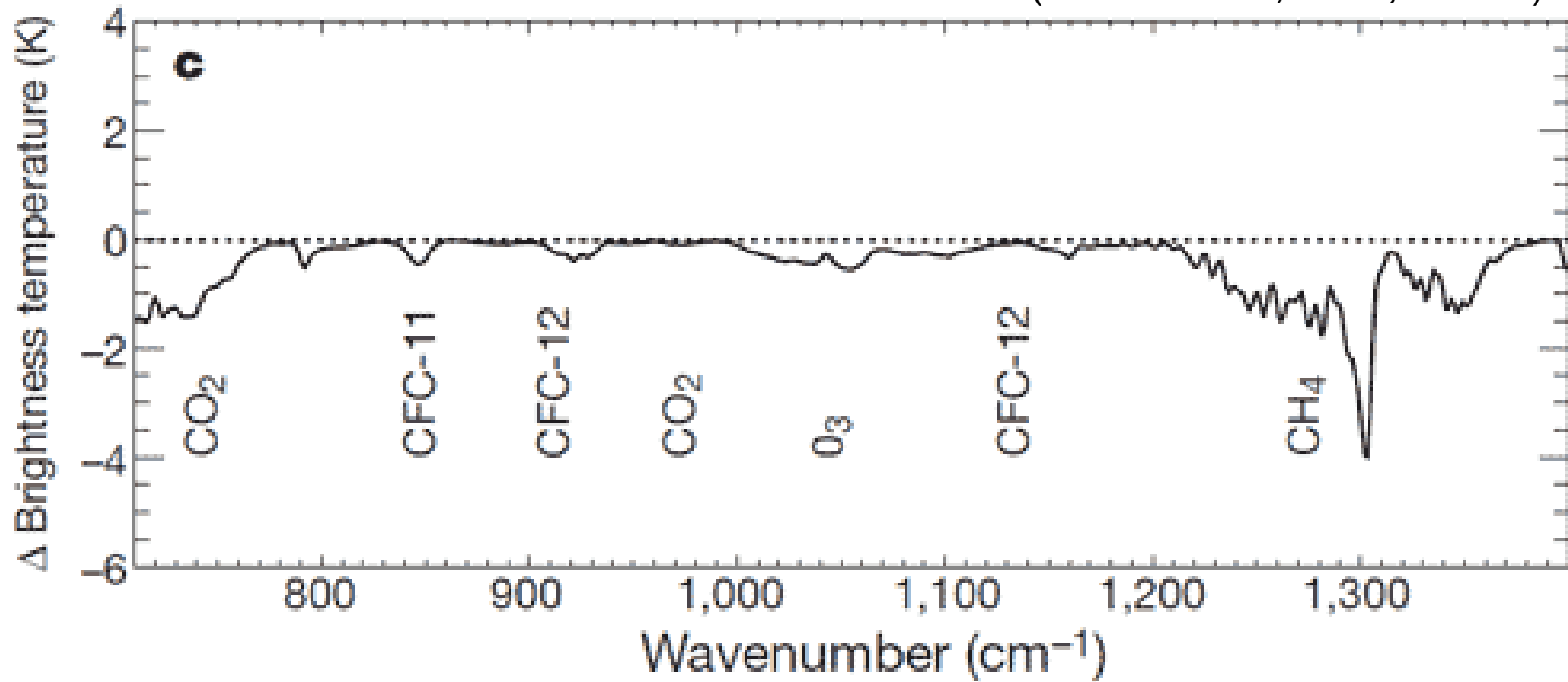


skepticalscience.com





Difference between 1970 and 1997 (Harries et al., 2001, Nature)

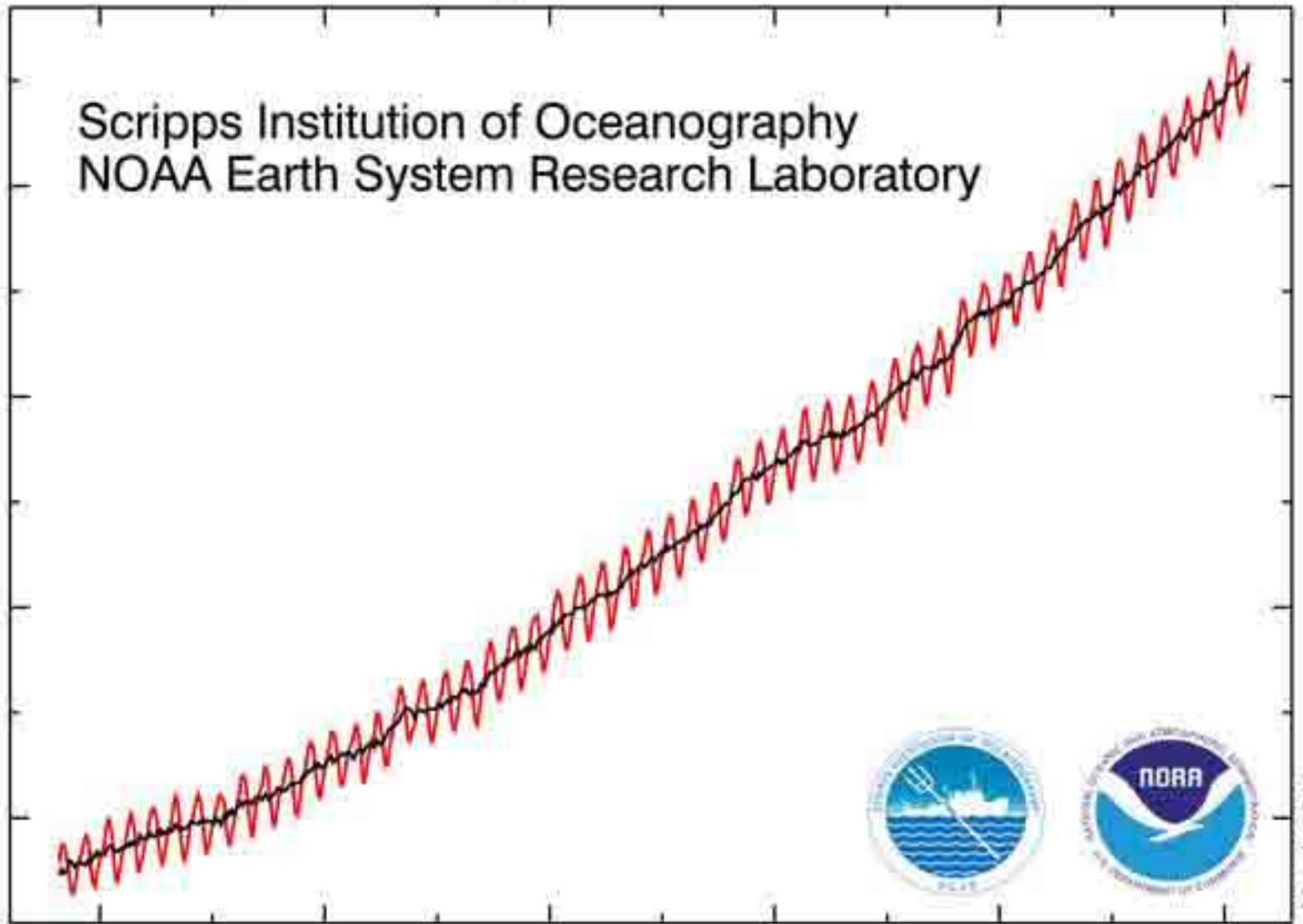


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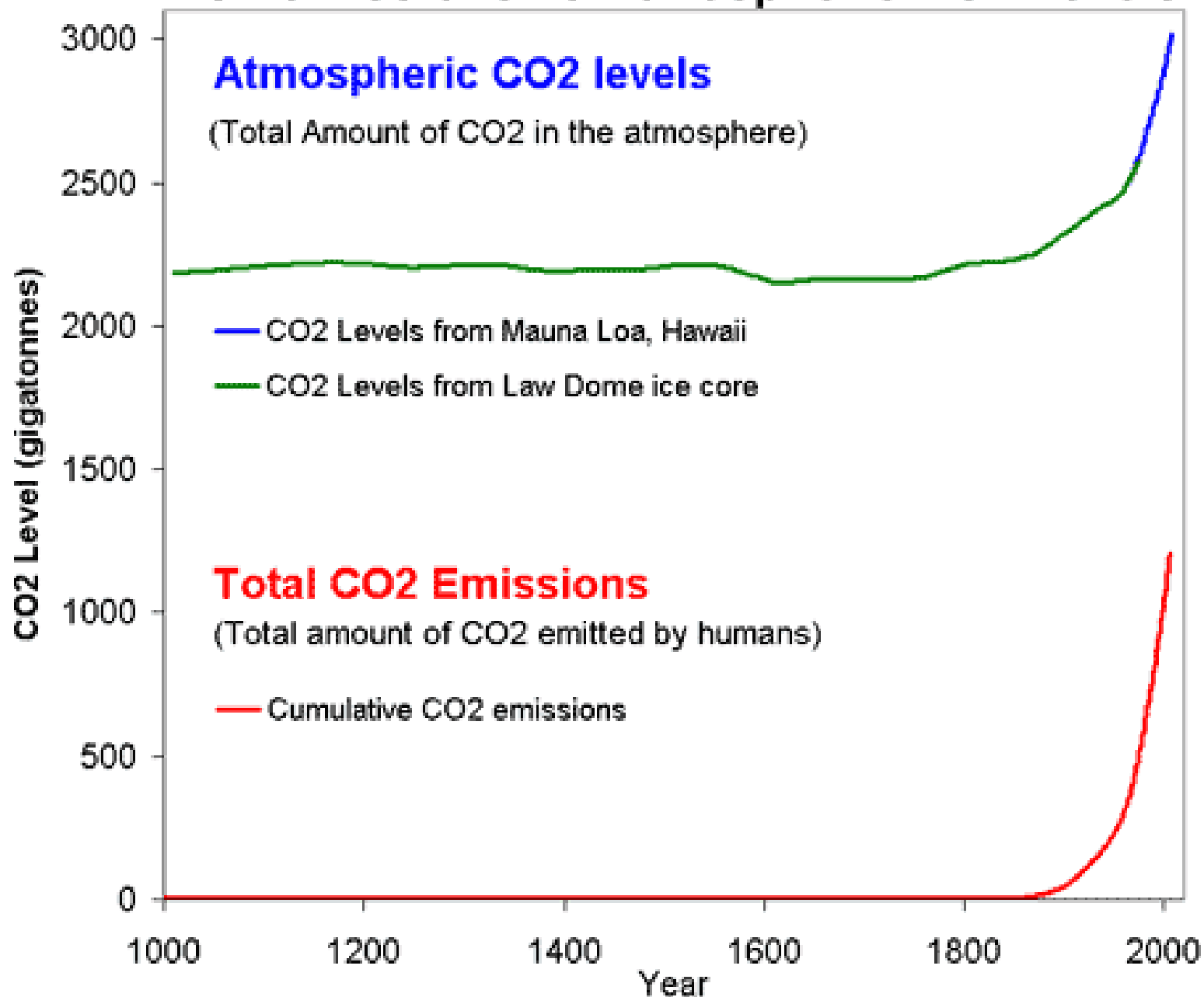
2000

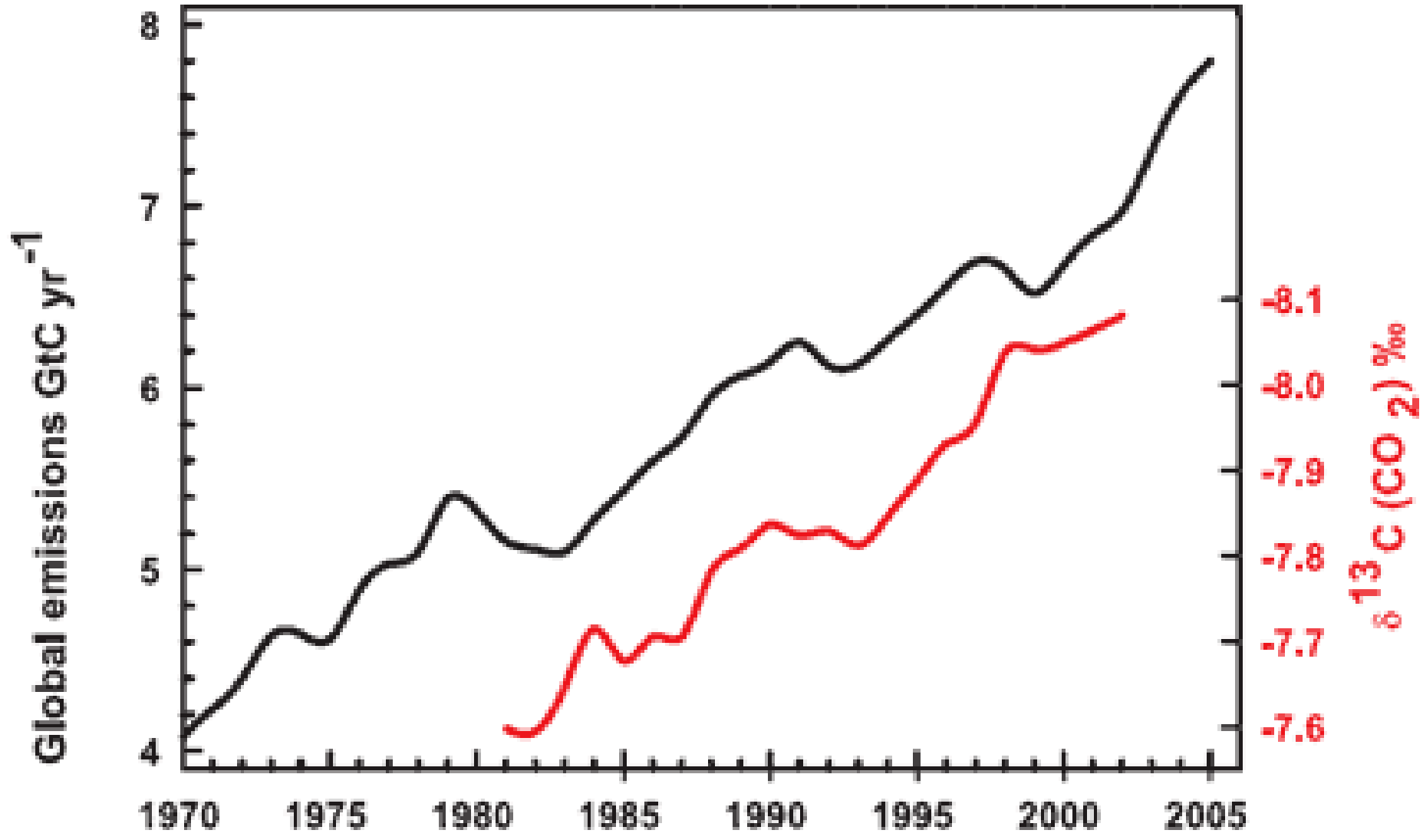
2010

YEAR

March 2011

CO2 emissions vs Atmospheric CO2 Levels





Global Temperatures

Temperature Anomaly ($^{\circ}\text{C}$)

- Annual Average
- Five Year Average

