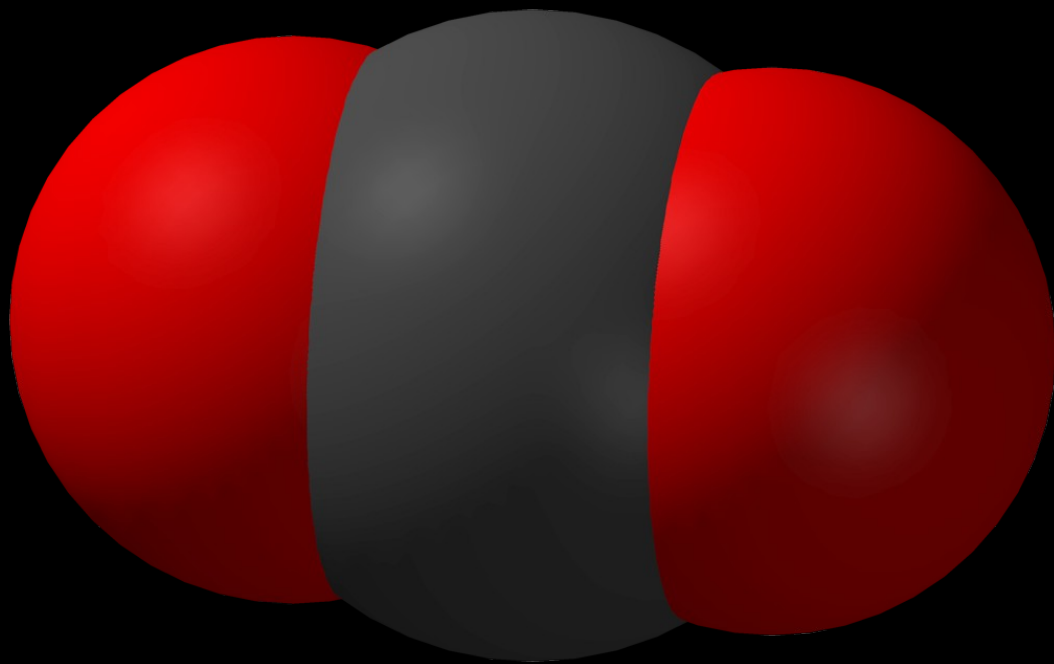
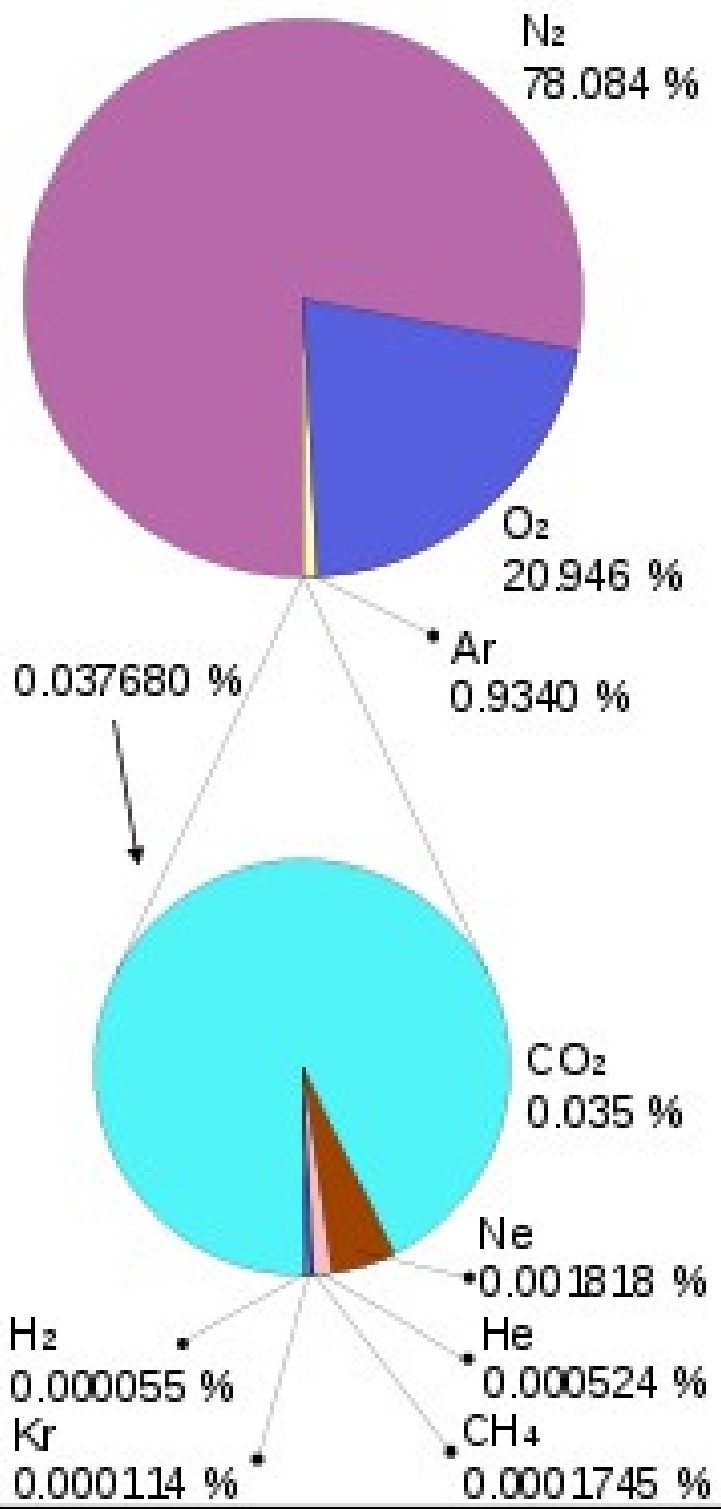


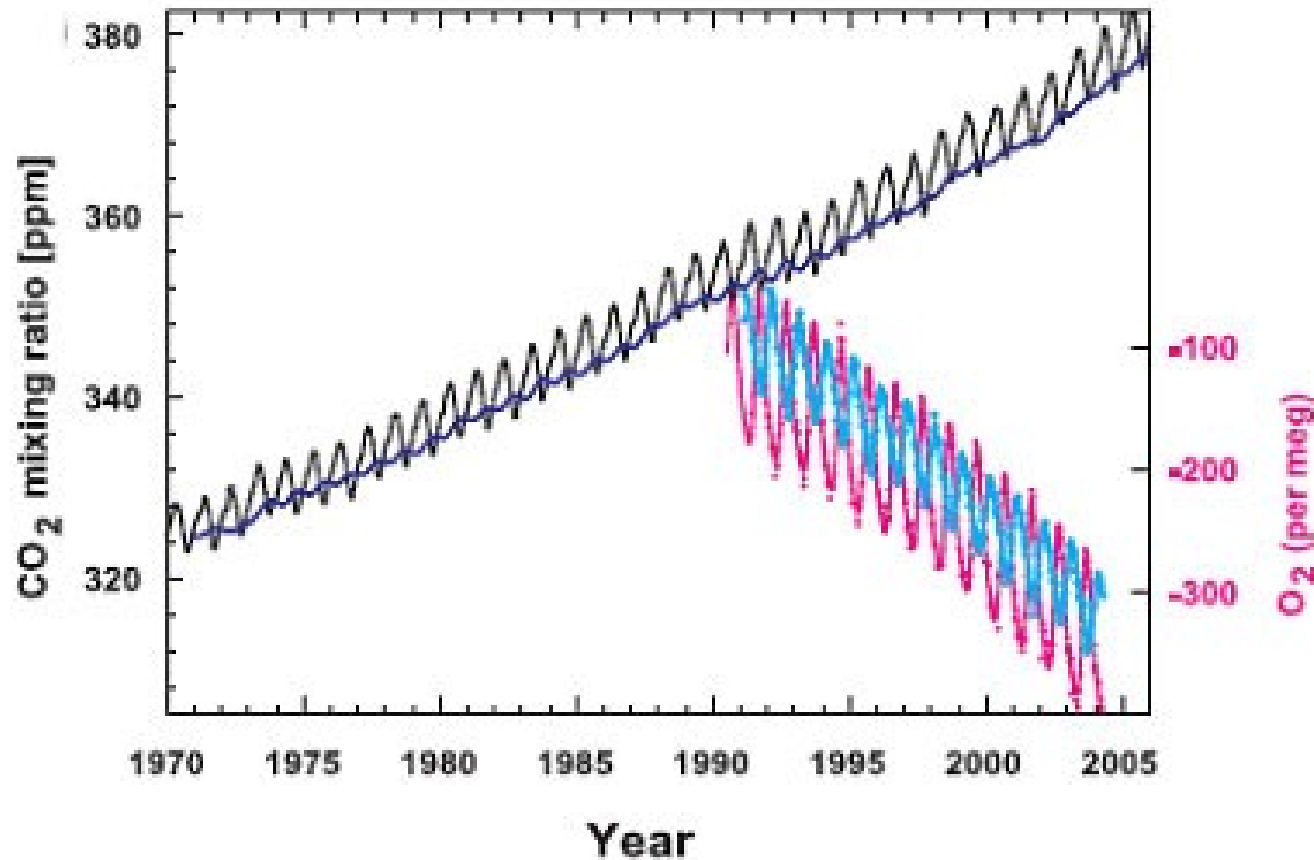
CO₂



350 ppm = ? %



Oxygen Levels are Decreasing



<http://green.yahoo.com/blog/climate411/134/how-we-know-humans-cause-global-warming-part-2-of-5-chemistry.html>

Rekonstrukce bažiny před 300 miliony let



<http://paleobiology.si.edu/paleoArt/Techniques/pages/reconstuct9.htm>







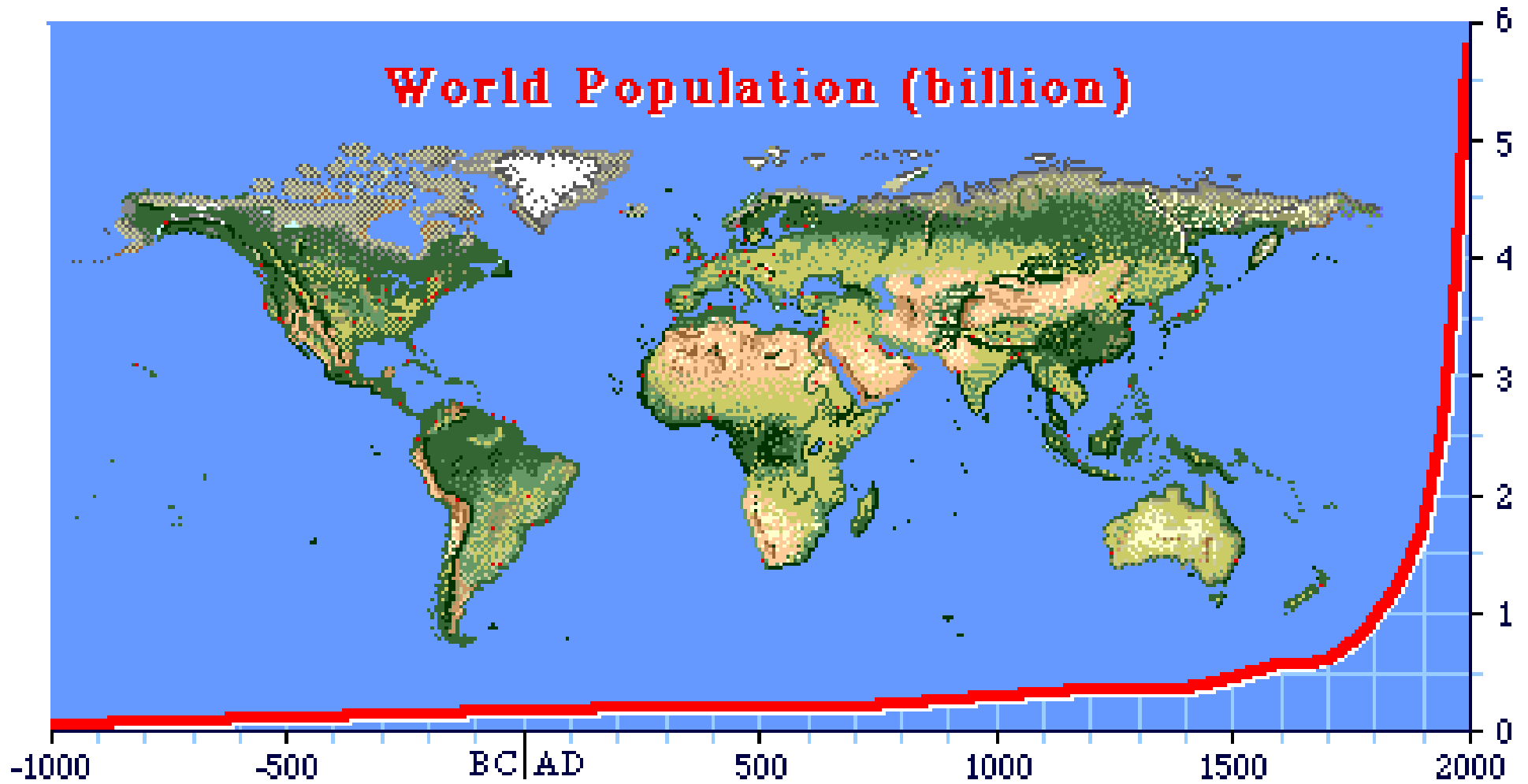
Uhelná elektrárna Dětmarovice

4 x 200 MW



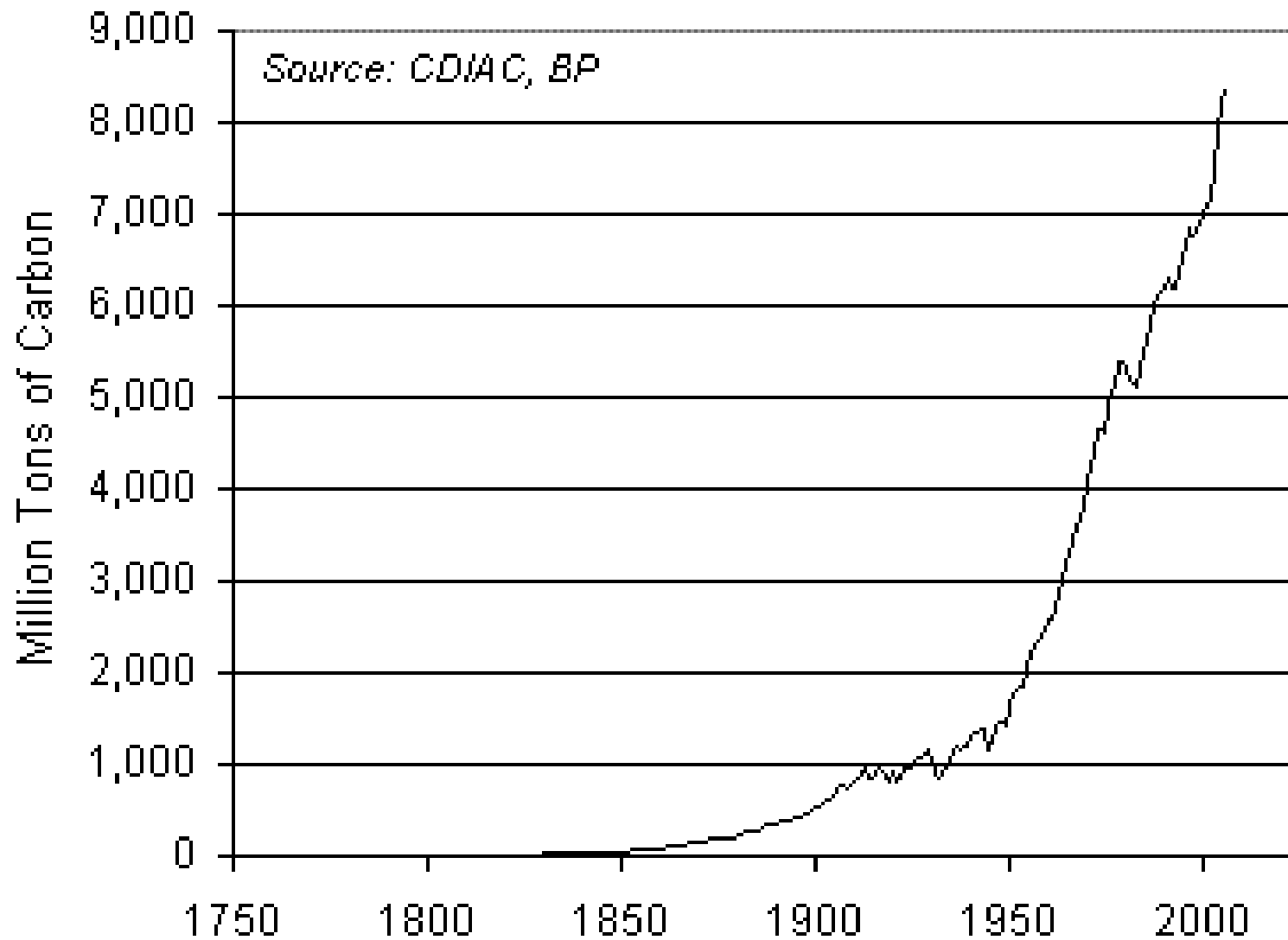


World Population (billion)



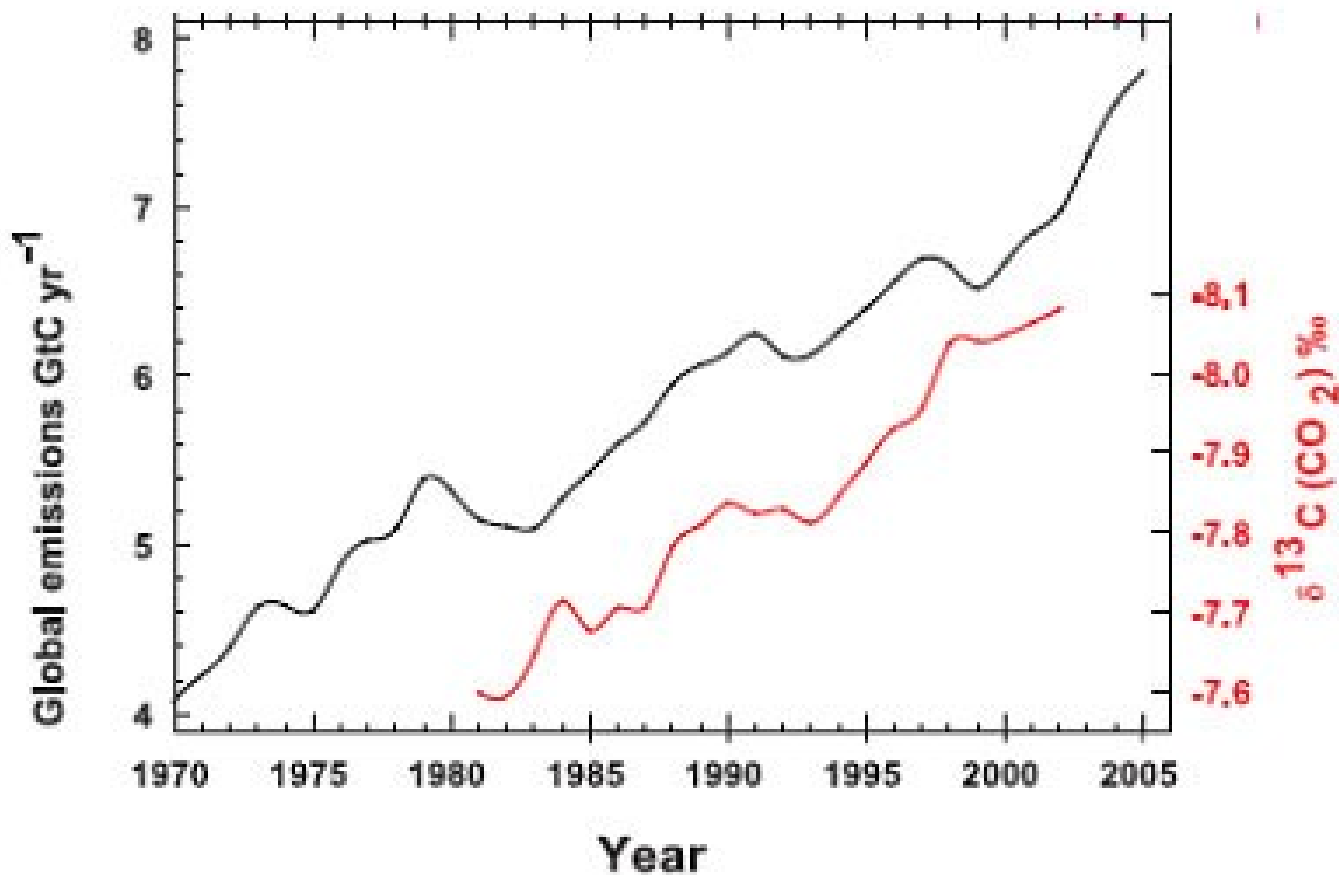
<http://www.eolss.net/>

Global Carbon Dioxide Emissions from Fossil Fuel Burning, 1751-2006



<http://www.earthpolicy.org/Indicators/CO2/2008.htm>

Changing Carbon Isotope Ratios

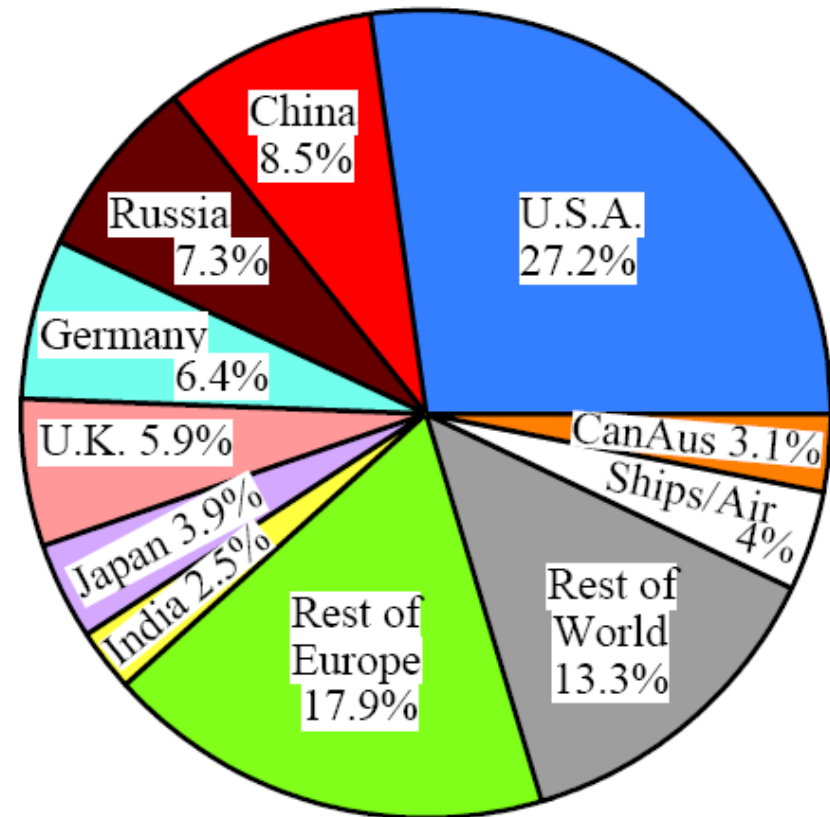
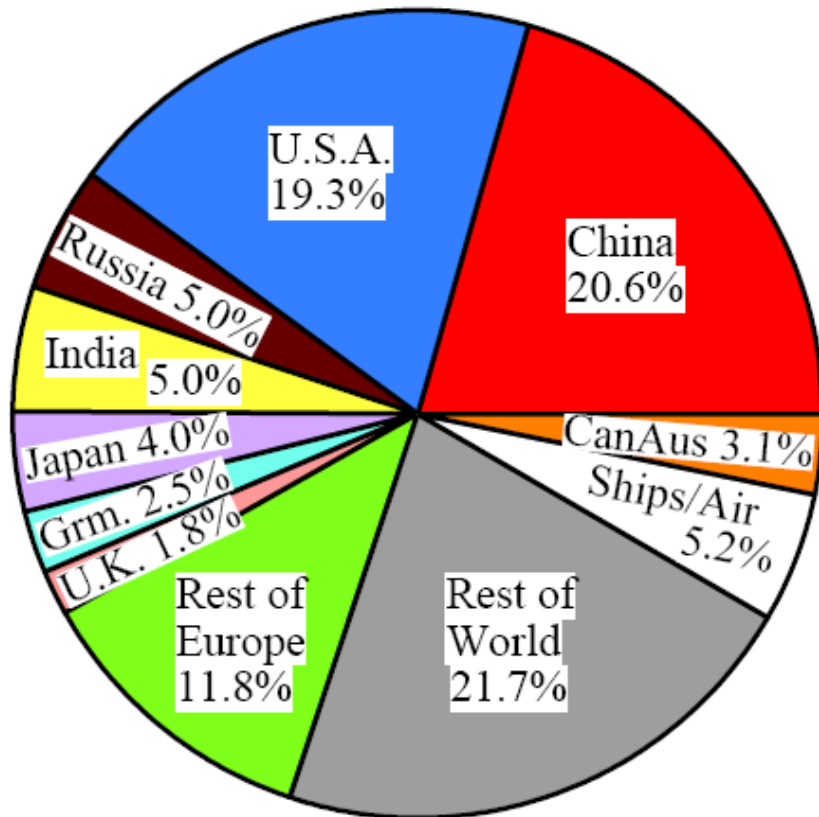


<http://green.yahoo.com/blog/climate411/134/how-we-know-humans-cause-global-warming-part-2-of-5-chemistry.html>

Fossil Fuel CO₂ Emissions

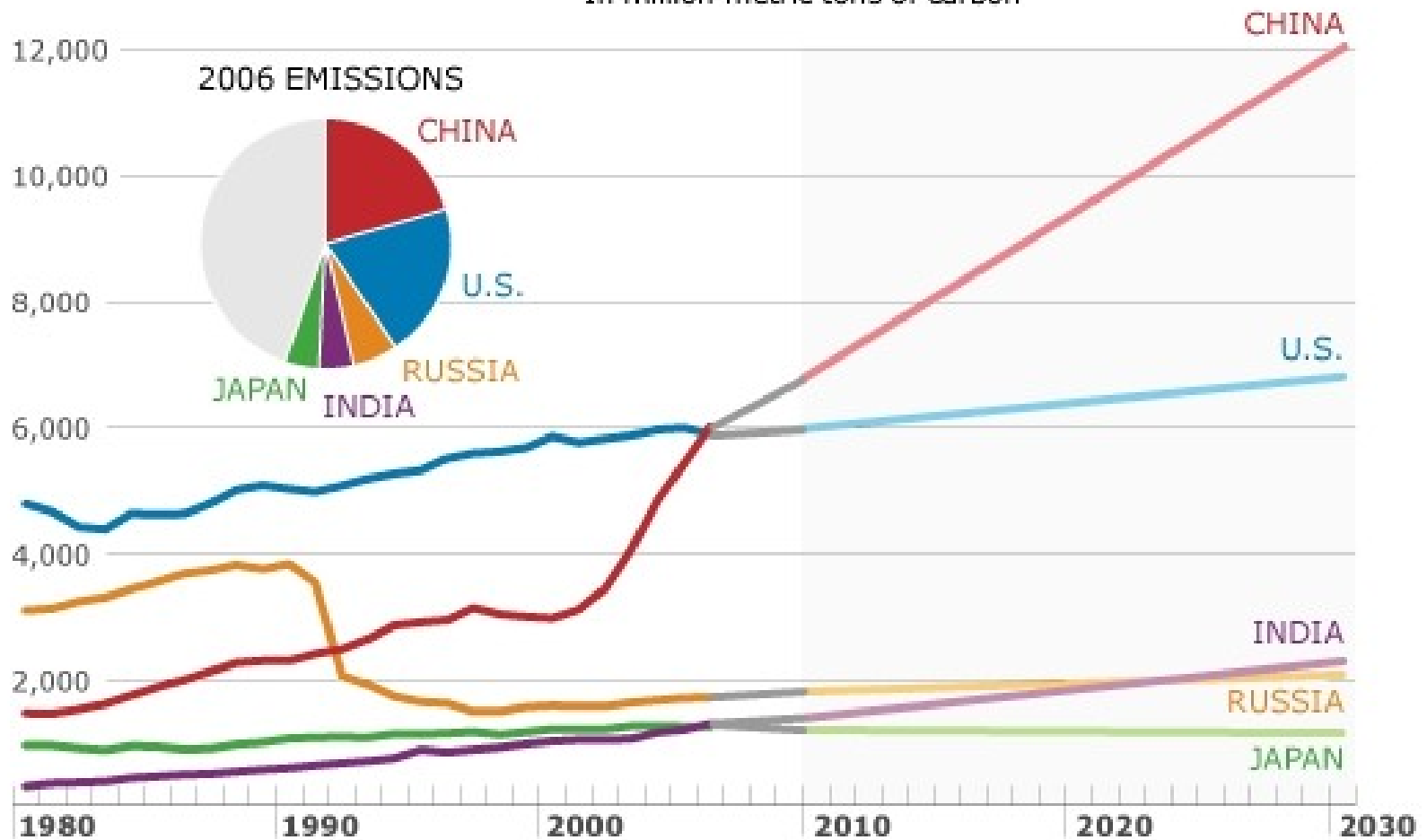
(a) 2007 Annual Emissions

(b) 1751-2007 Cumulative Emissions



OVERALL OIL GAS COAL

CO2 EMISSIONS AND PROJECTIONS In million metric tons of carbon



SOURCE: Energy Information Administration



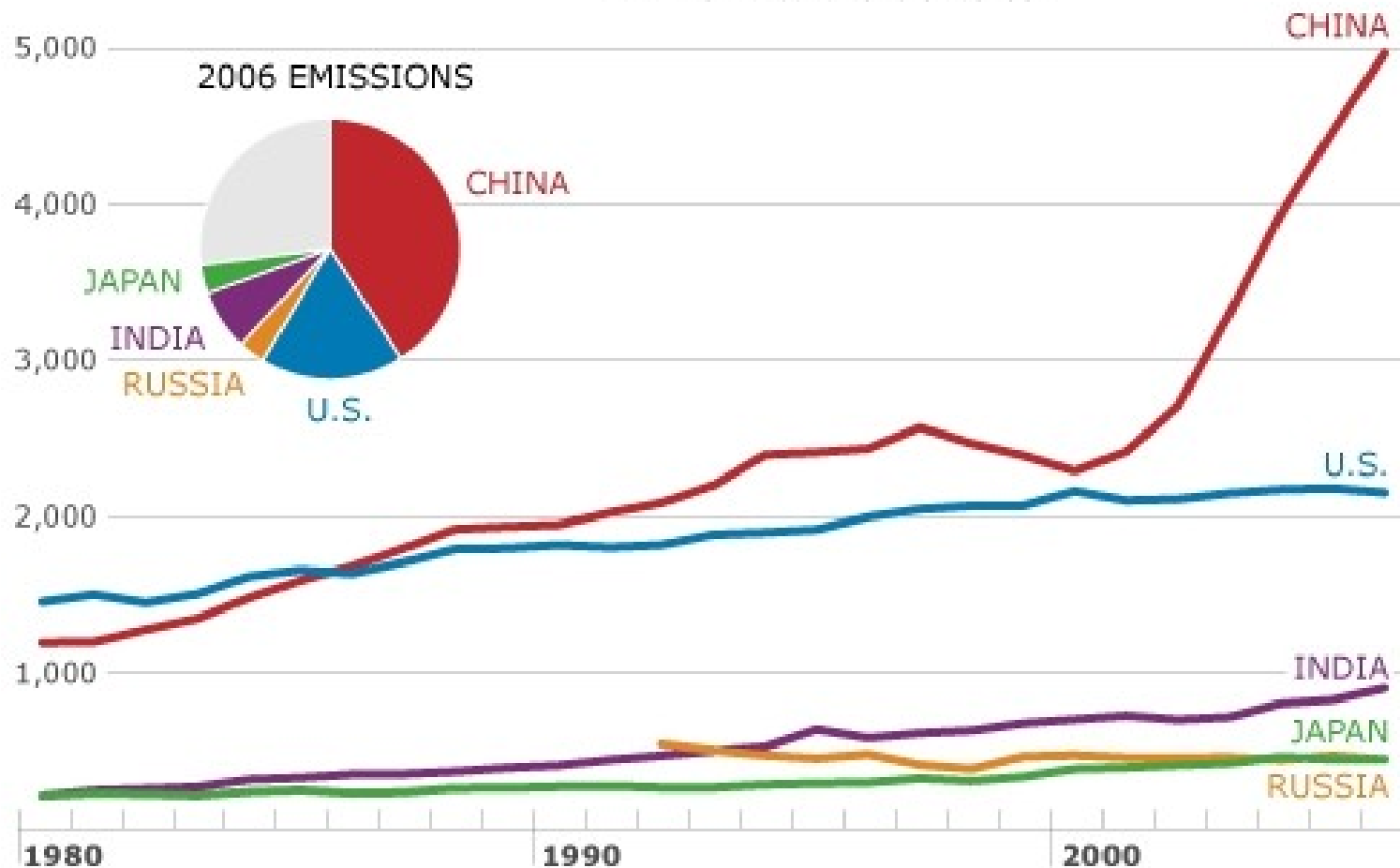
ROLL OVER THE ARROW TO SEE ORIGINAL DATA BEFORE MNN TRANSLATION.

<http://www.mnn.com/earth-matters/translating-uncle-sam/stories/eia-which-countries-produce-the-most-co2>

OVERALL OIL GAS COAL

CO2 EMISSIONS FROM COAL

In million metric tons of carbon



SOURCE: Energy Information Administration

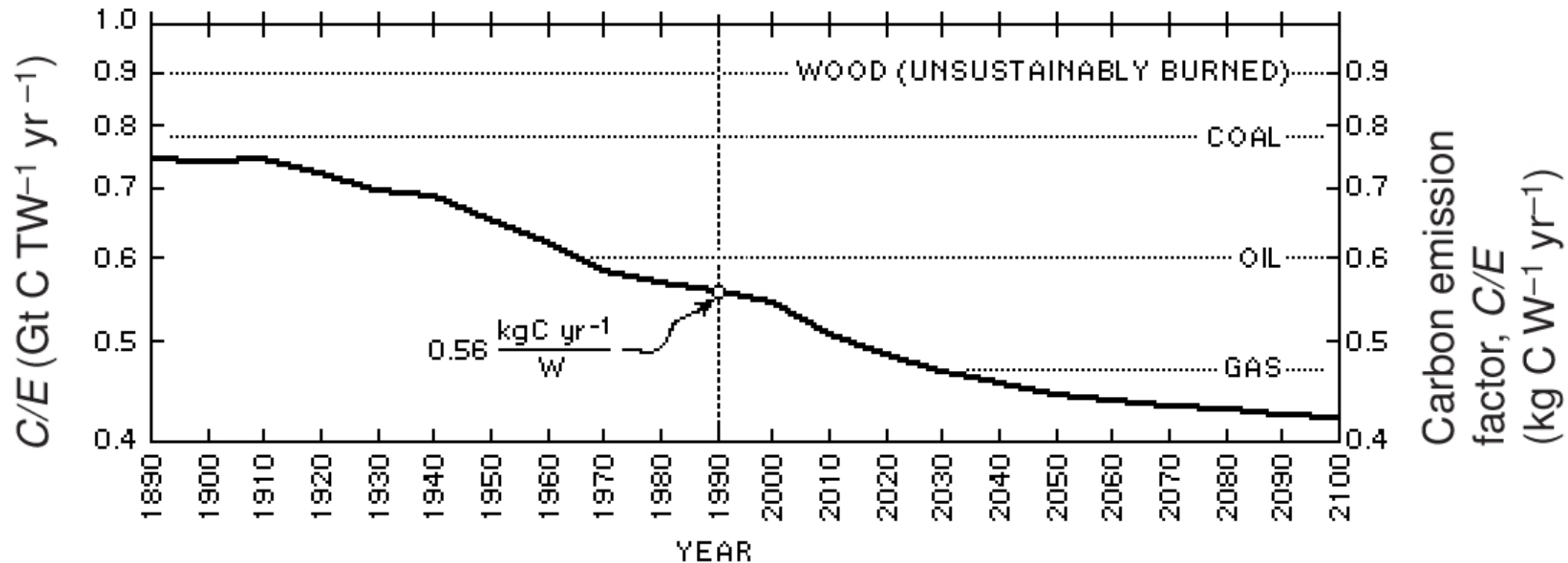
mnn



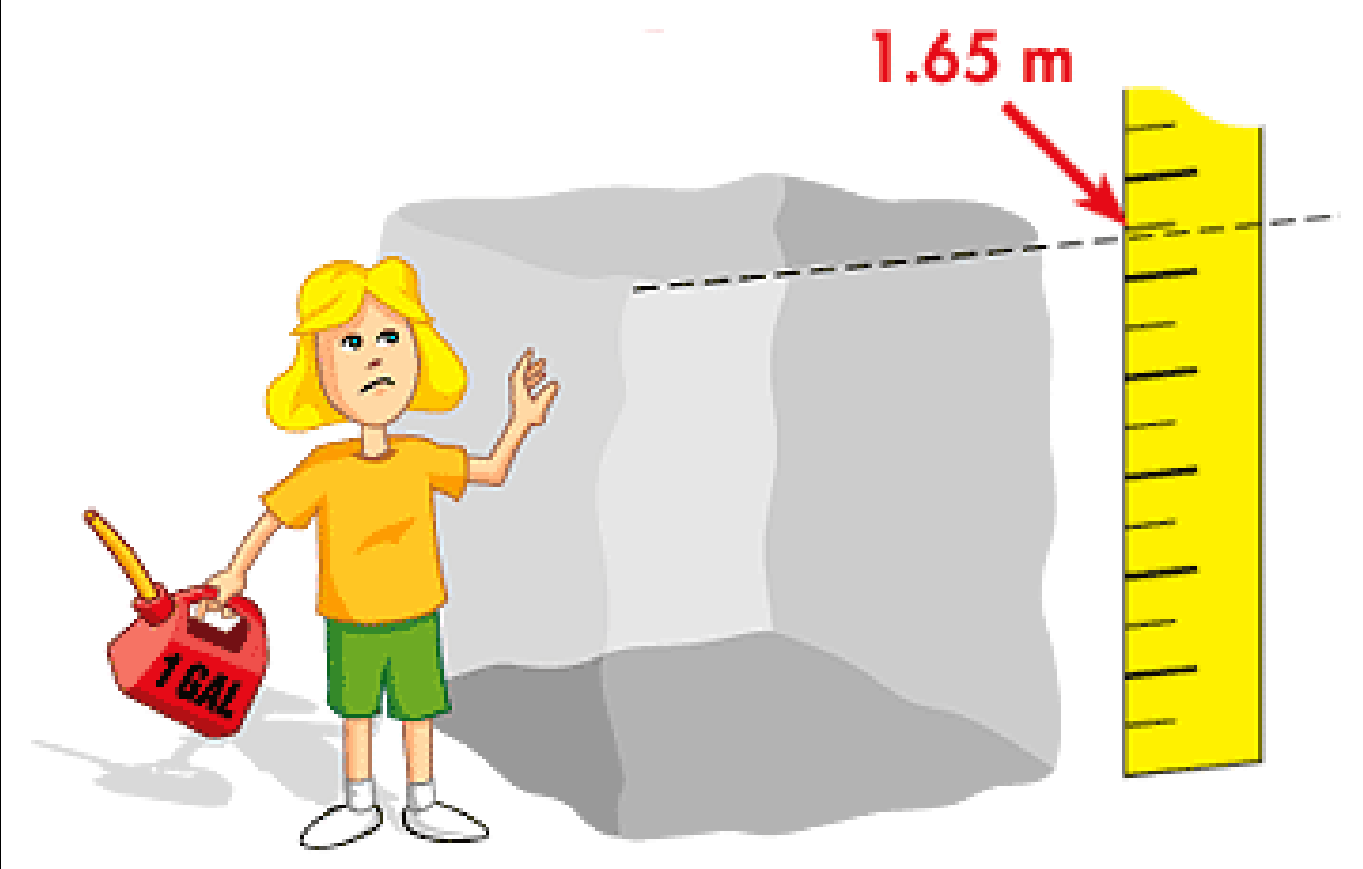
ROLL OVER THE ARROW TO SEE ORIGINAL DATA BEFORE MNN TRANSLATION.

<http://www.mnn.com/earth-matters/translating-uncle-sam/stories/eia-which-countries-produce-the-most-co2>

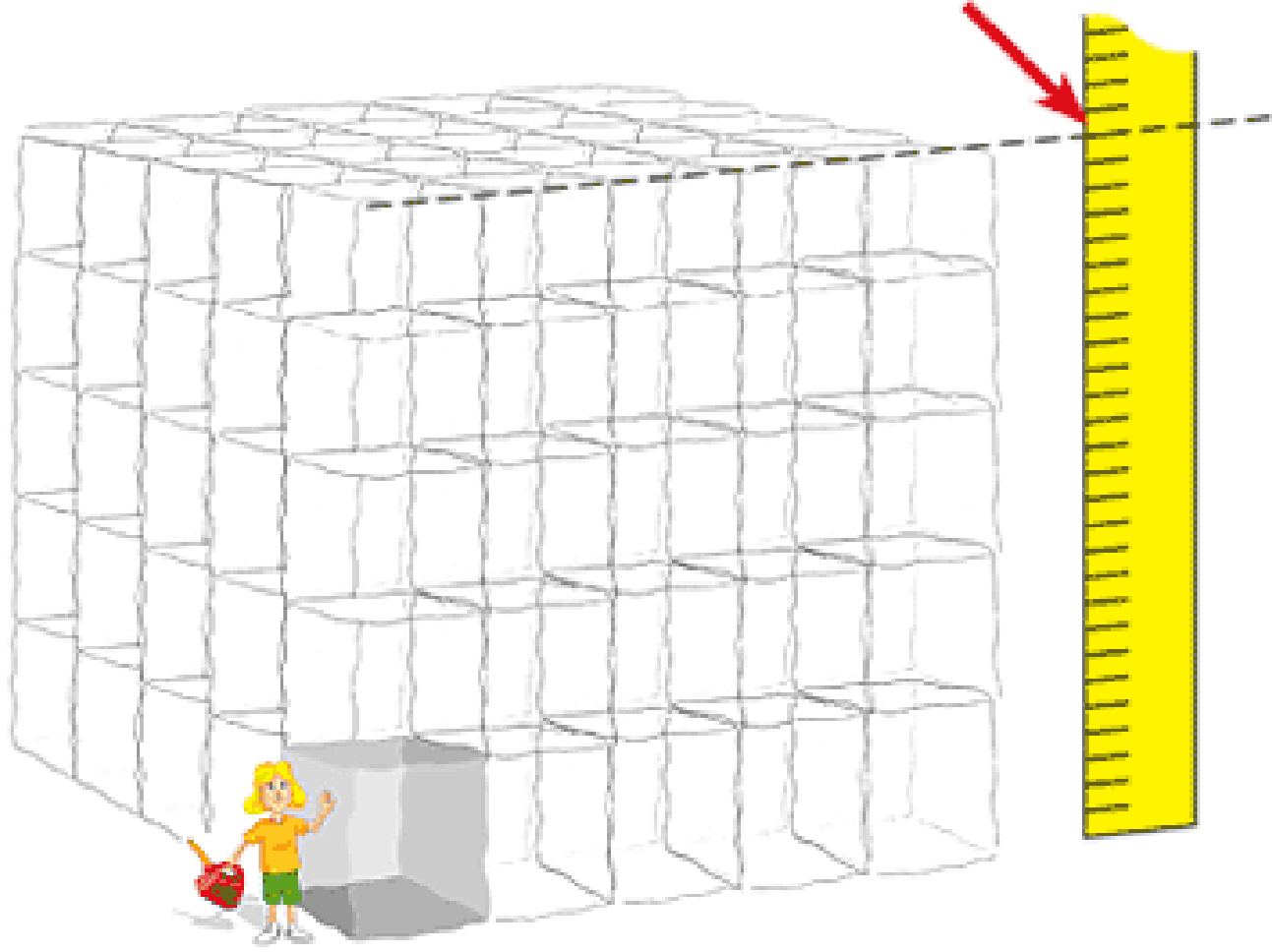
Carbon Intensity of Energy Mix

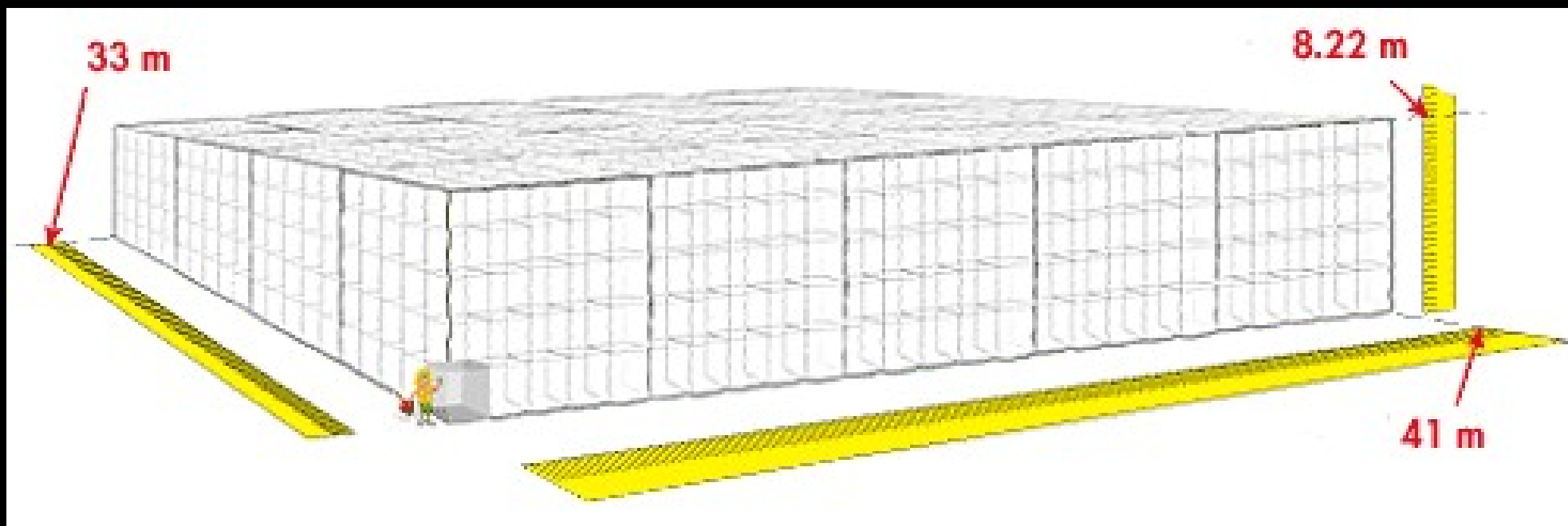


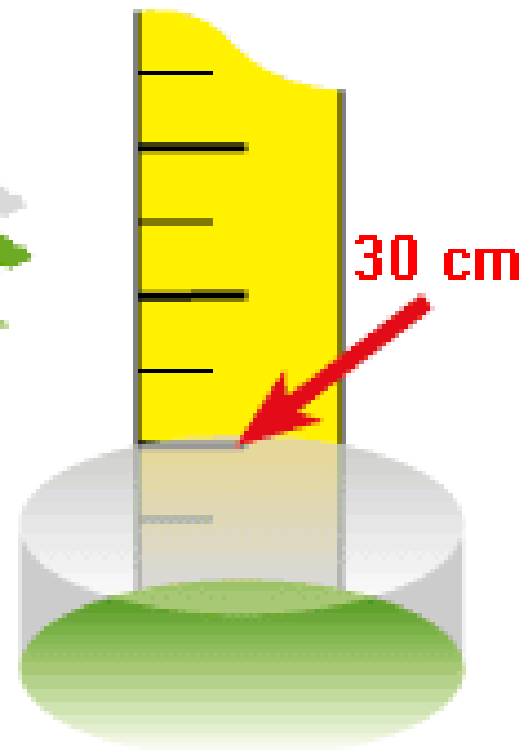
M. I. Hoffert et. al., Nature, 1998, 395, 881



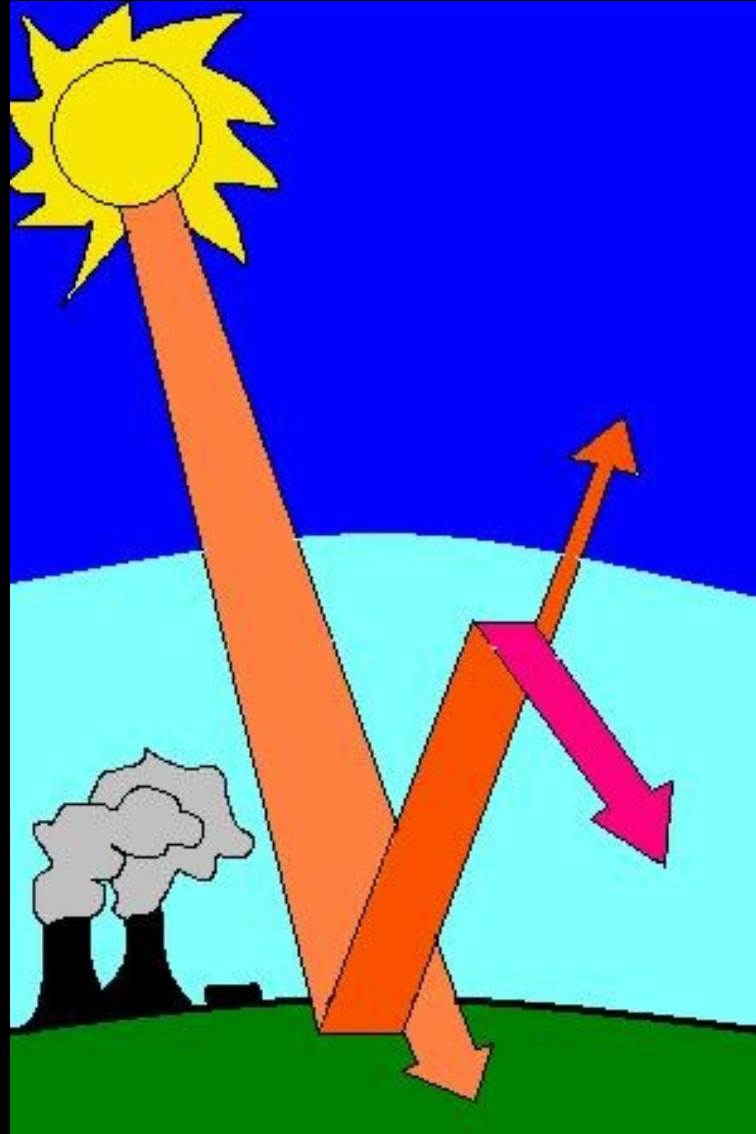
8.22 m



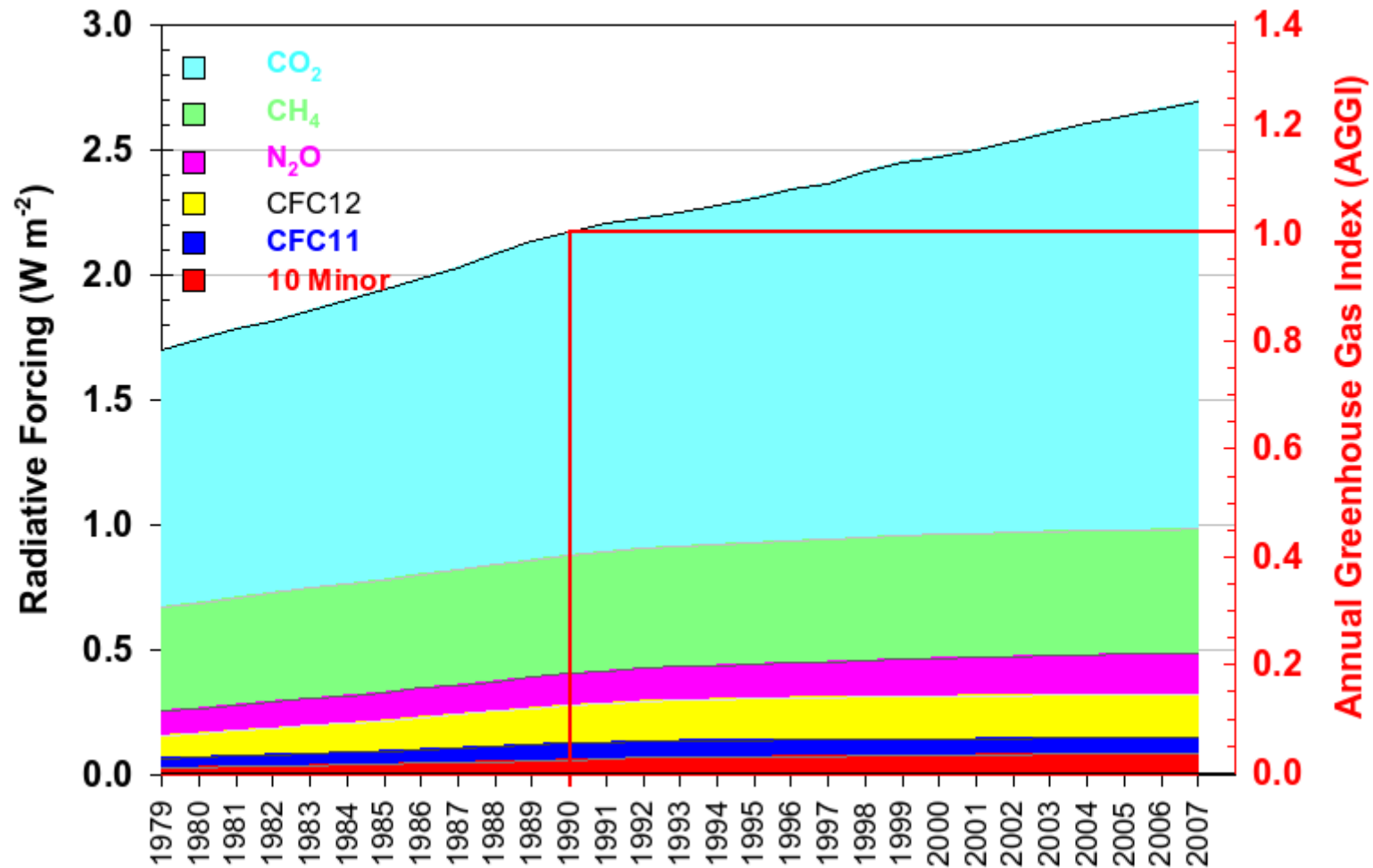




Skleníkový jev



NOAA Annual Greenhouse Gas Index

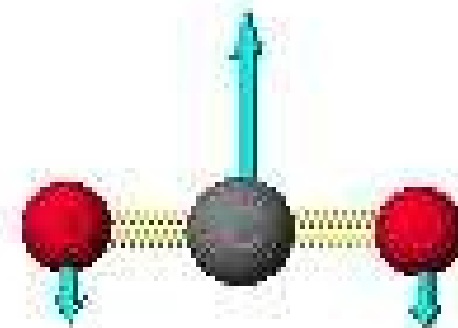


<http://www.esrl.noaa.gov/gmd/aggi/>

Carbon Dioxide - Infrared Absorption



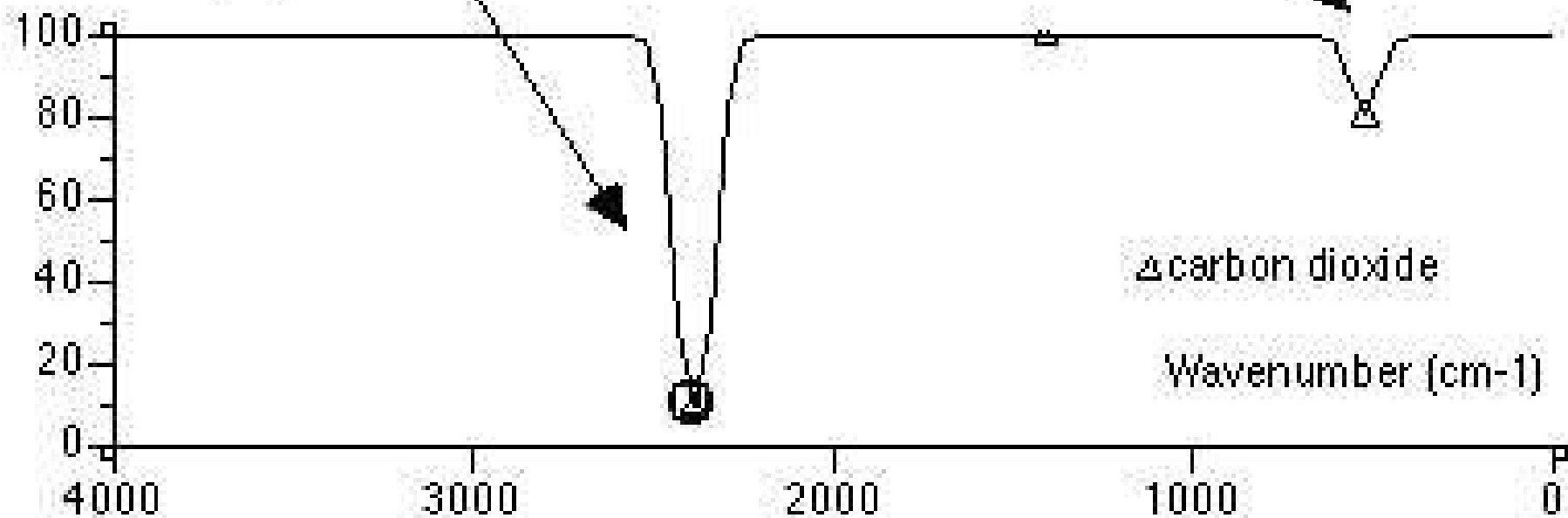
bond stretching



bond bending

Transmittance (%)

Vibrational Spectra



△ carbon dioxide

Wavenumber (cm⁻¹)

Joseph Fourier - 1824



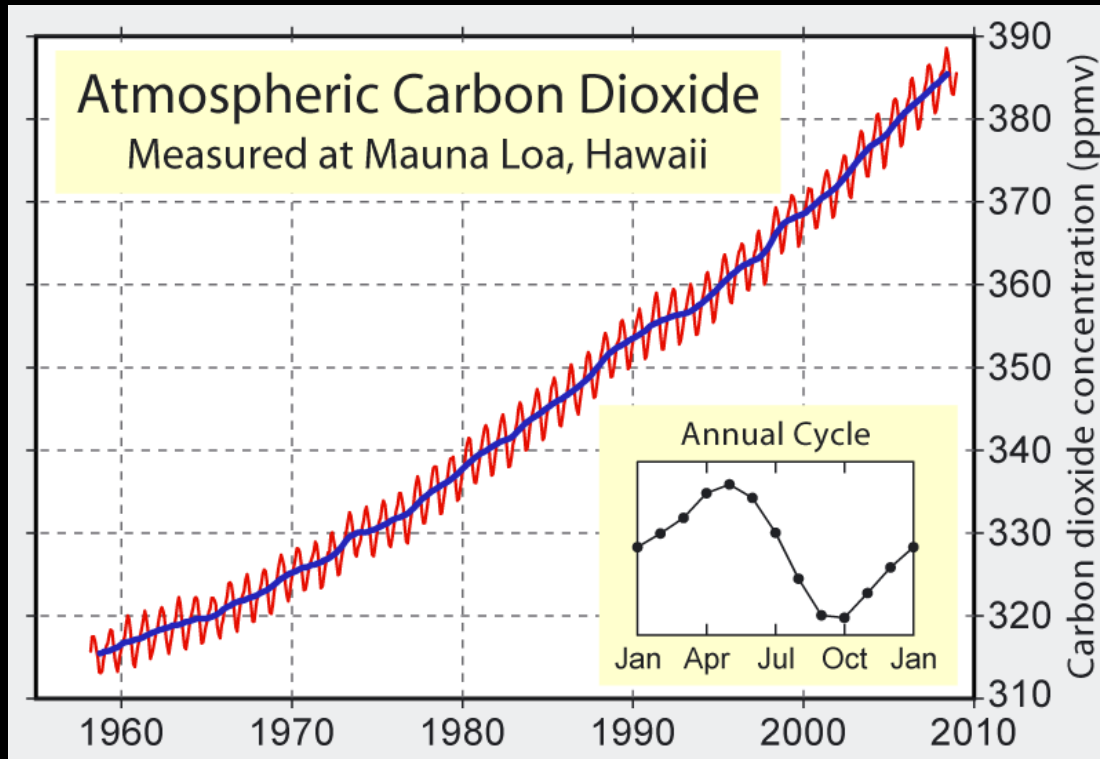
John Tyndall - 1859



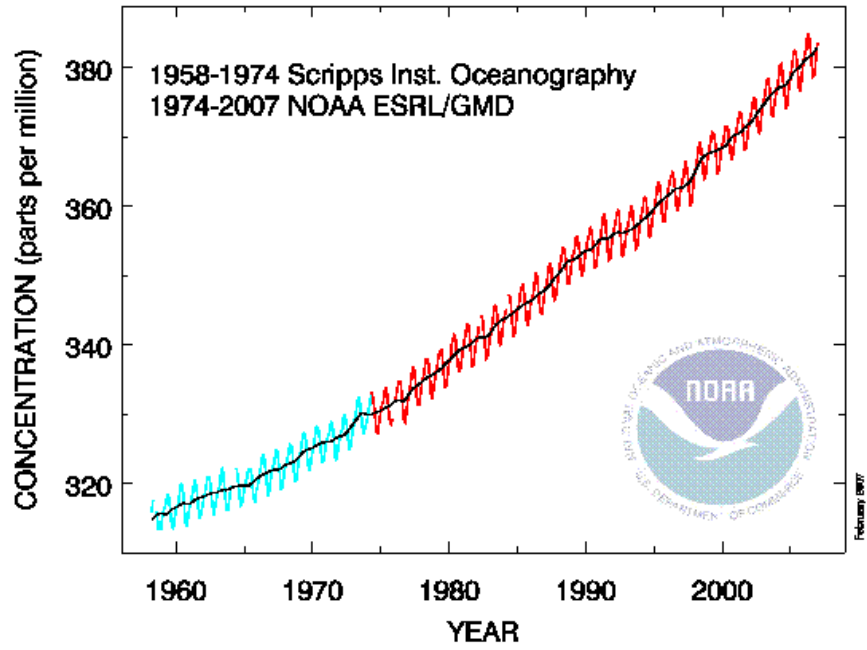
Svante Arrhenius - 1894



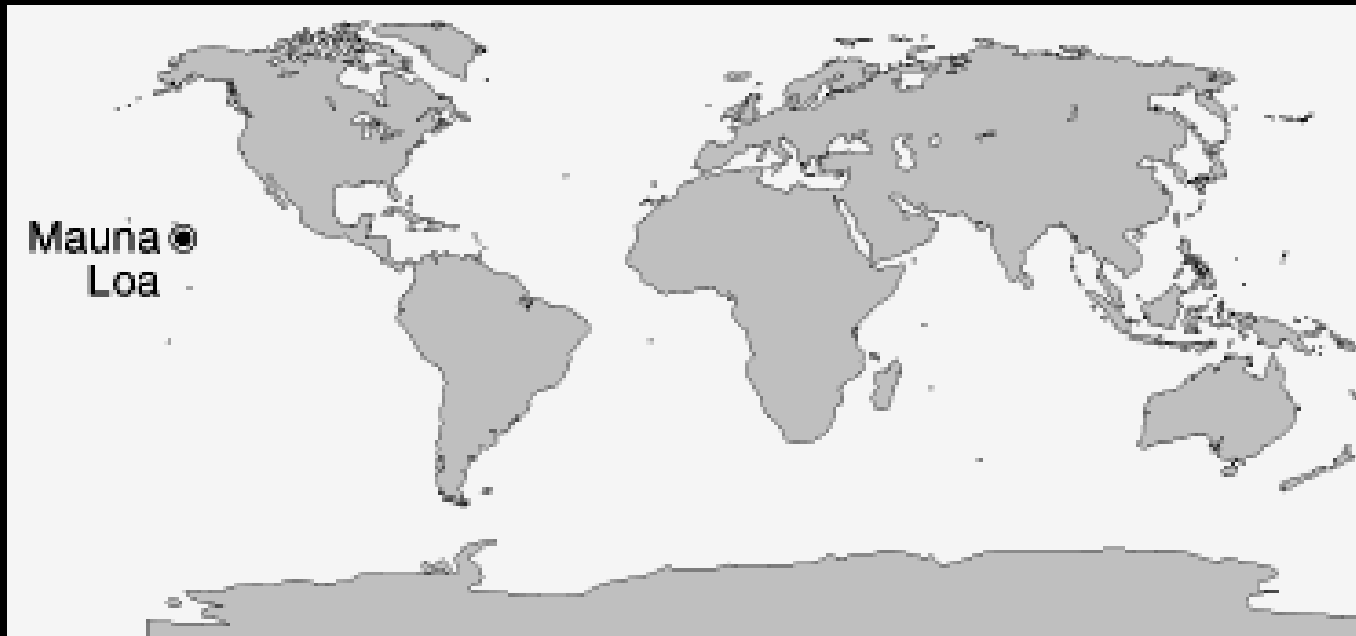
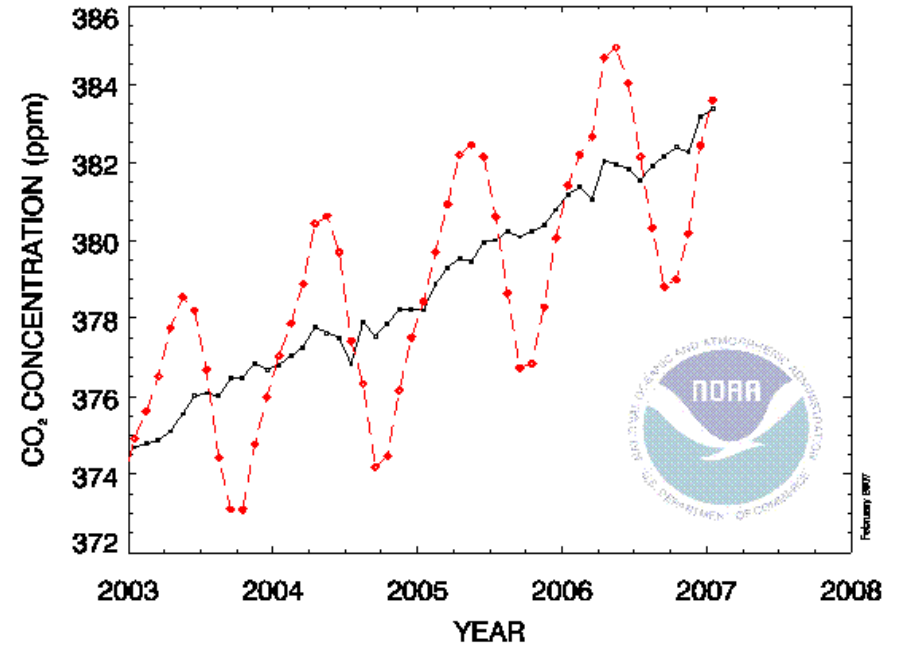
Charles David Keeling - 1958



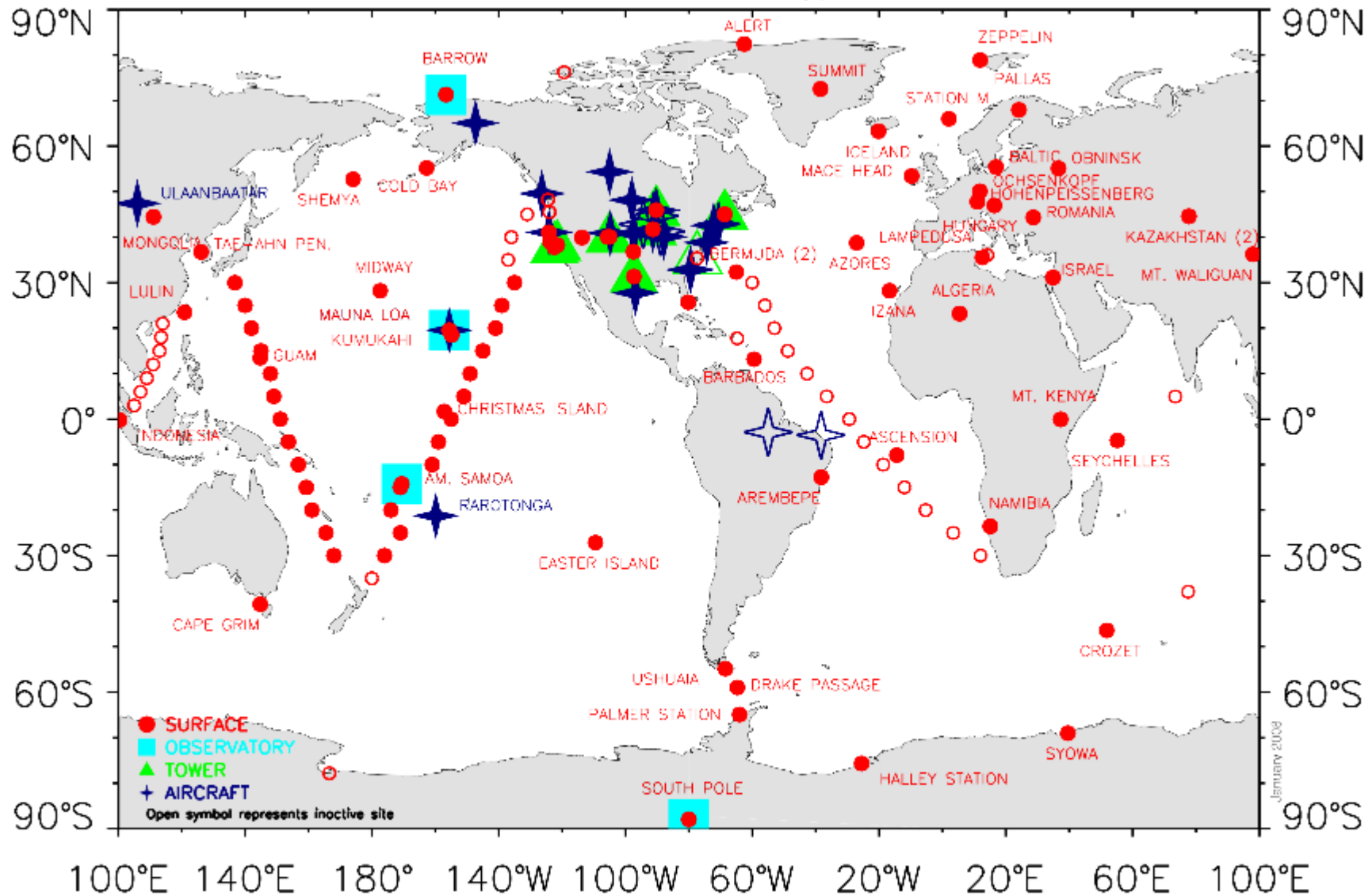
Atmospheric CO₂ at Mauna Loa Observatory



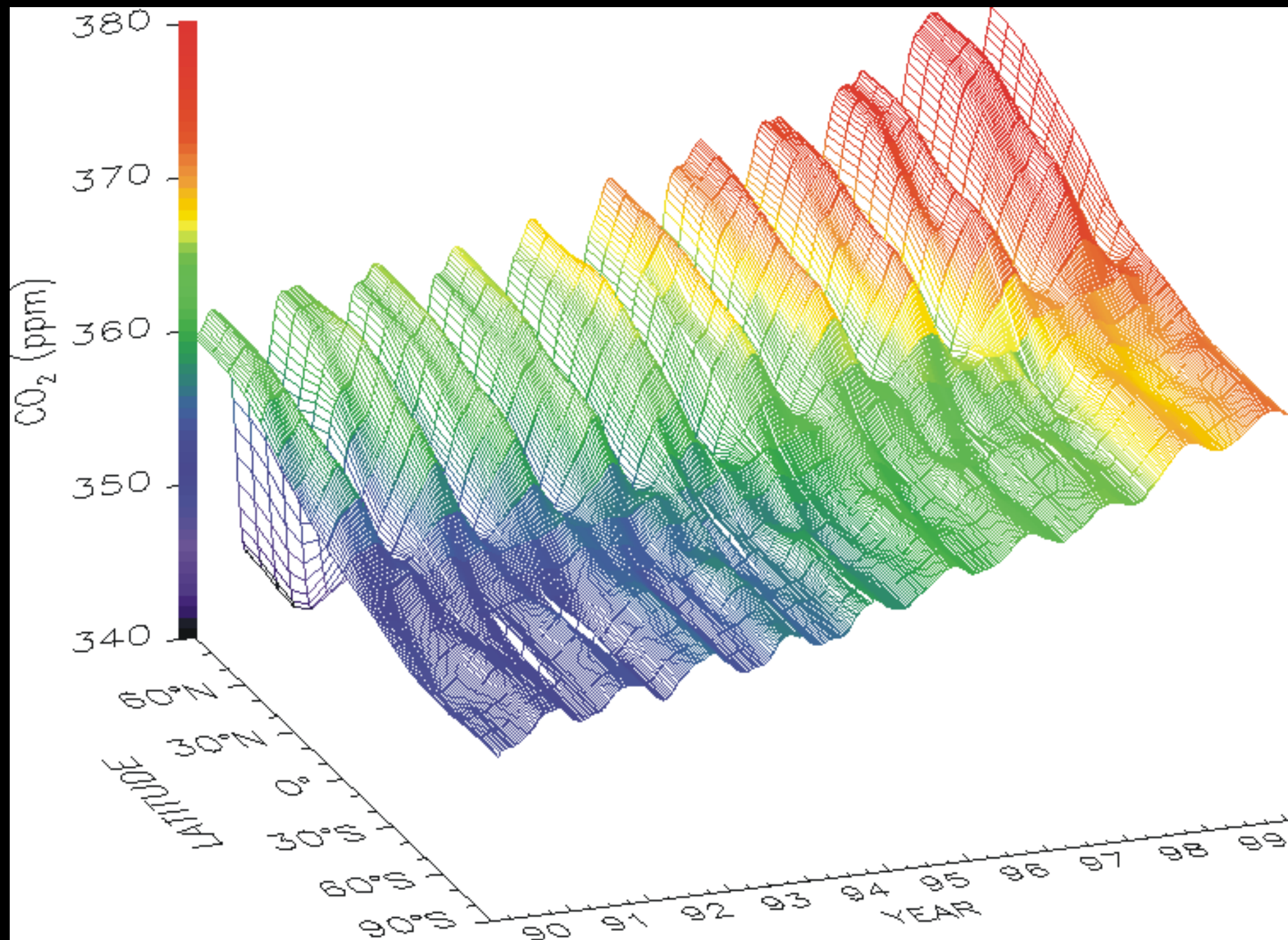
RECENT MONTHLY MEAN CO₂ AT MAUNA LOA



The NOAA Earth System Research Laboratory global cooperative air sampling network



<http://www.esrl.noaa.gov/gmd/aggi/>

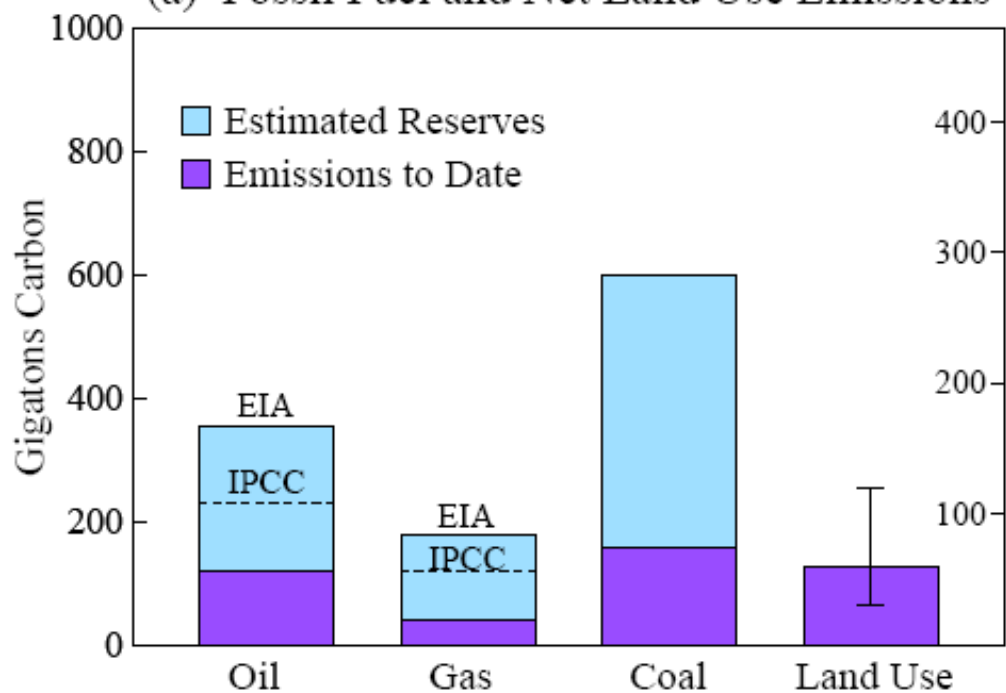


Cíl pro CO₂:
< 350 ppm

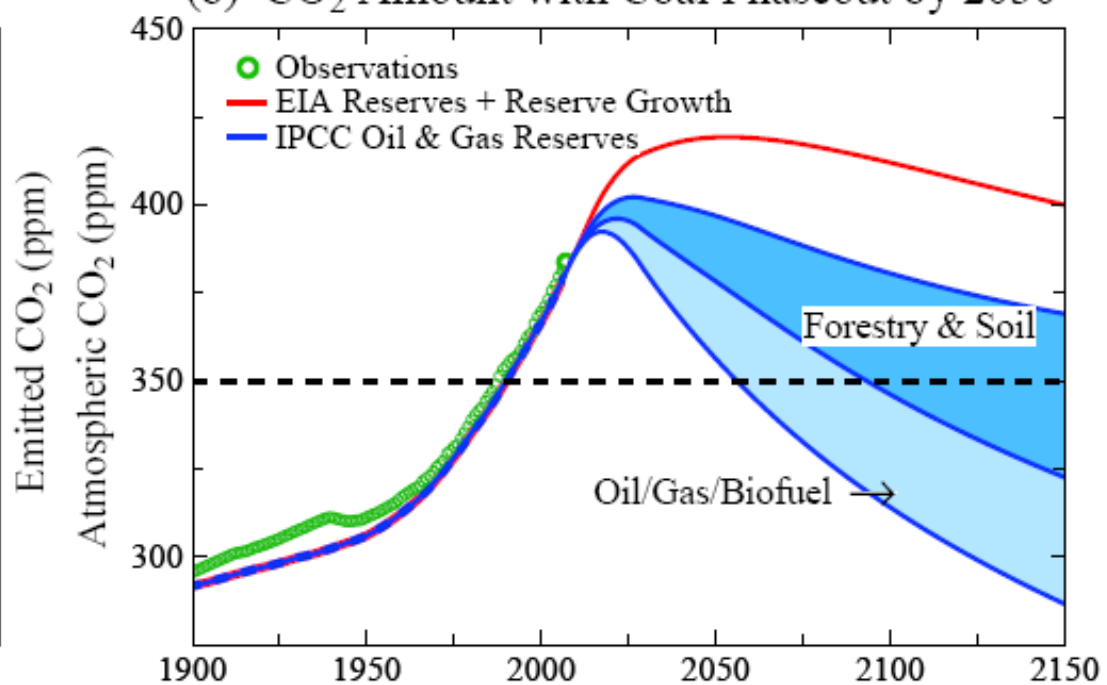
Pro záchranu světa, planety,
na níž se vyvynula civilizace.

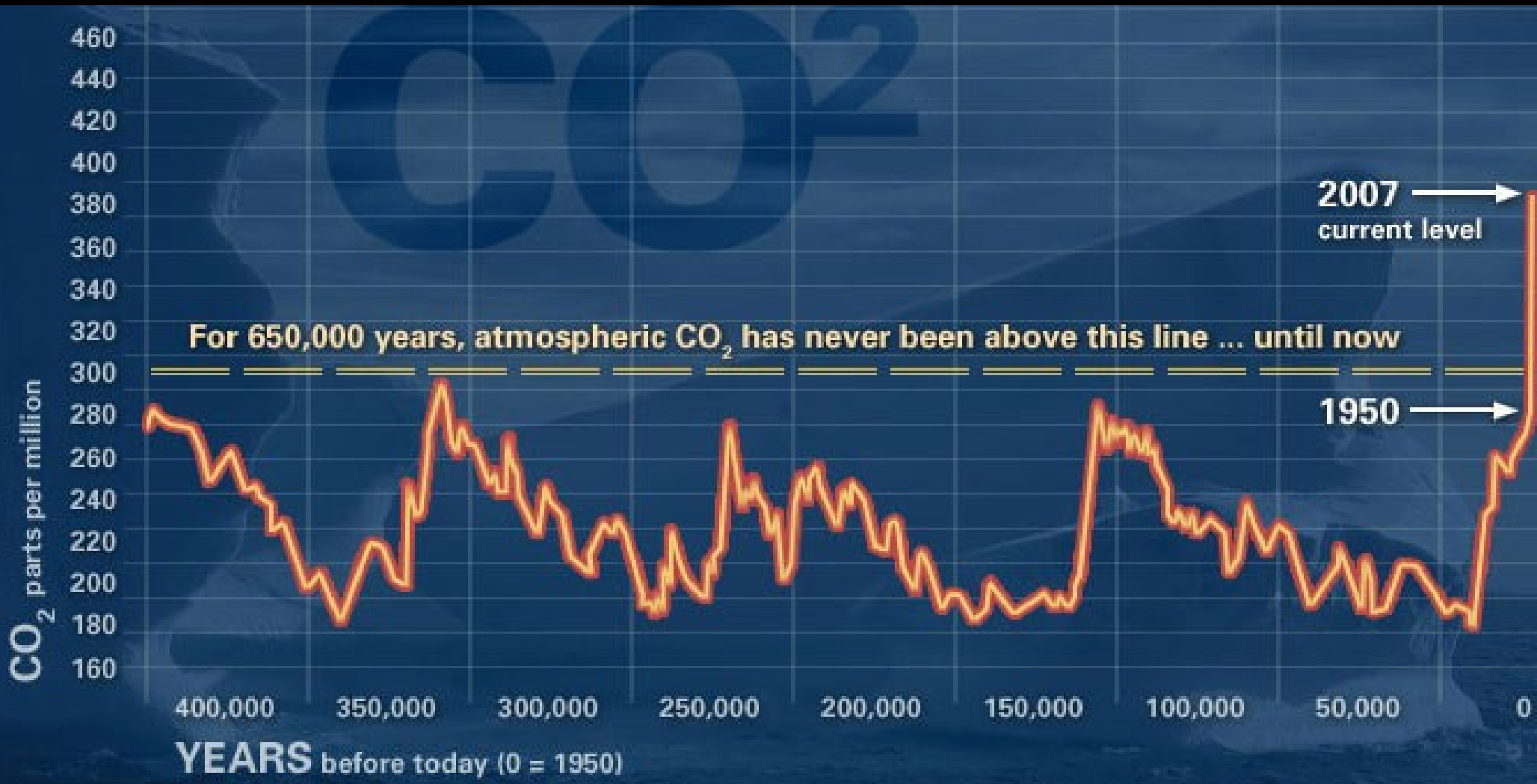
Technicky splnitelný, ale záklaním
podmínkou je přestat spalovat uhlí.

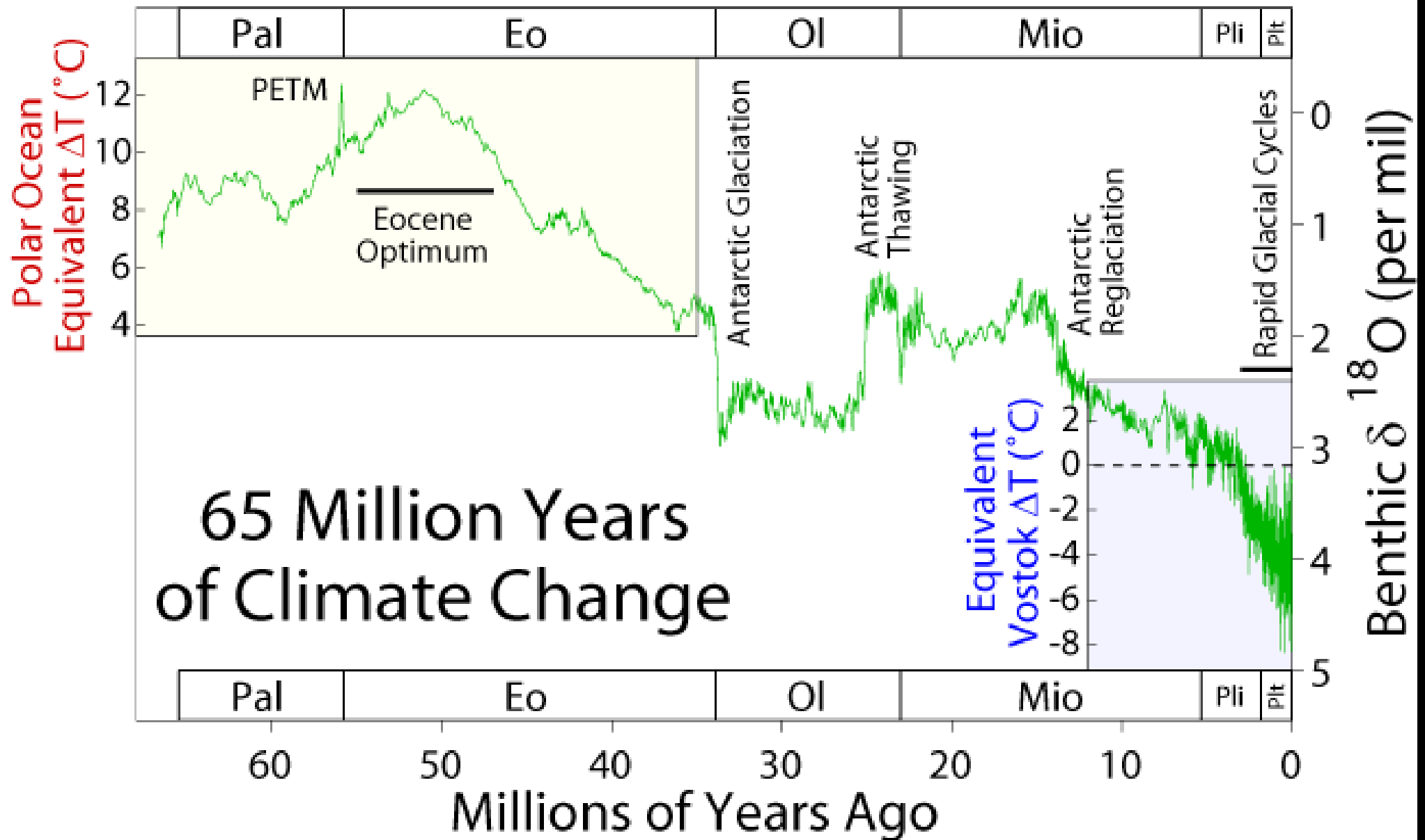
(a) Fossil Fuel and Net Land Use Emissions



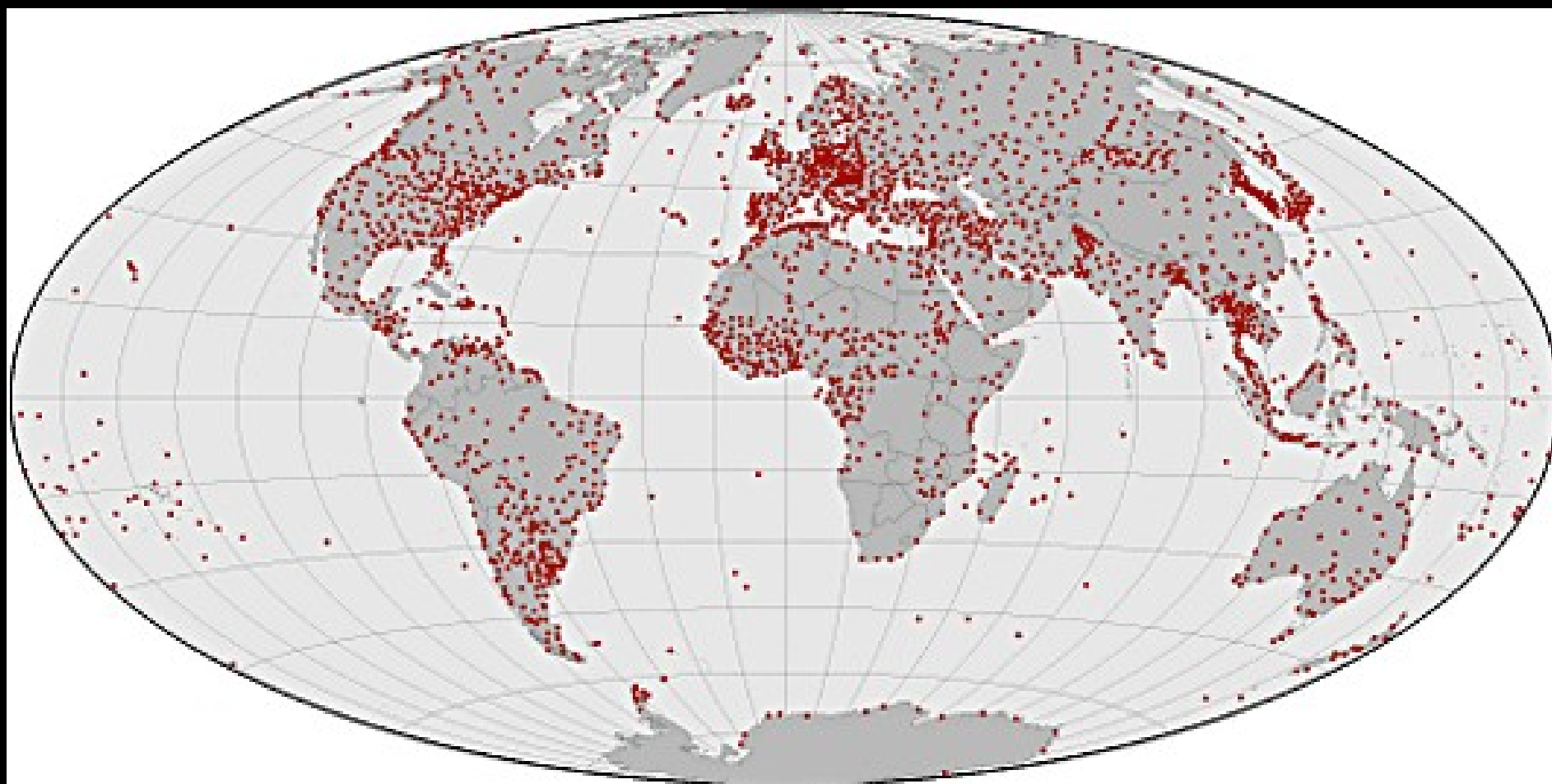
(b) CO₂ Amount with Coal Phaseout by 2030



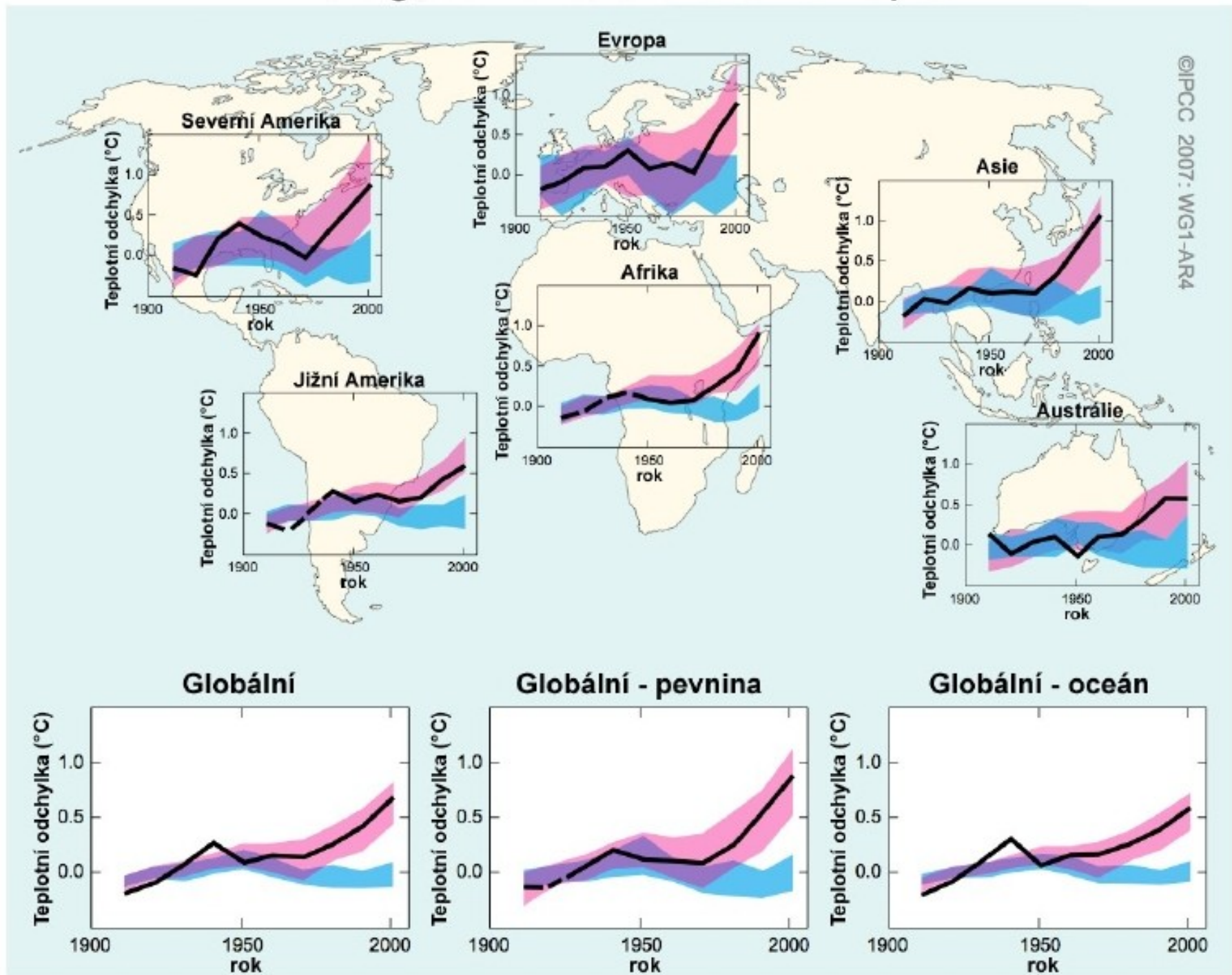


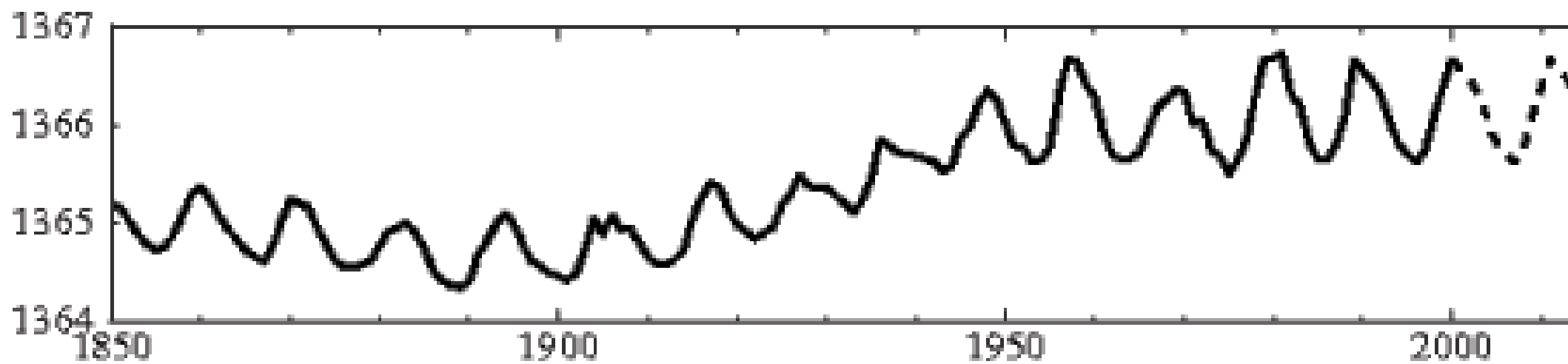
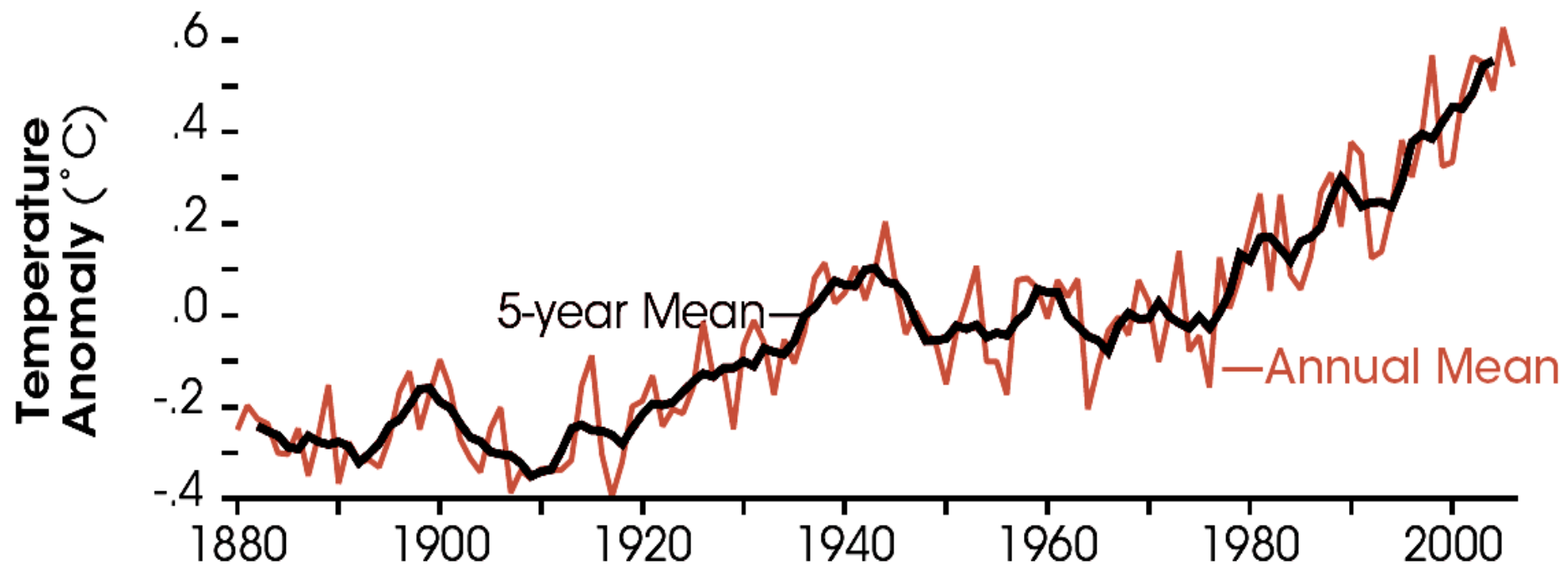


Sít' meteorologických stanic

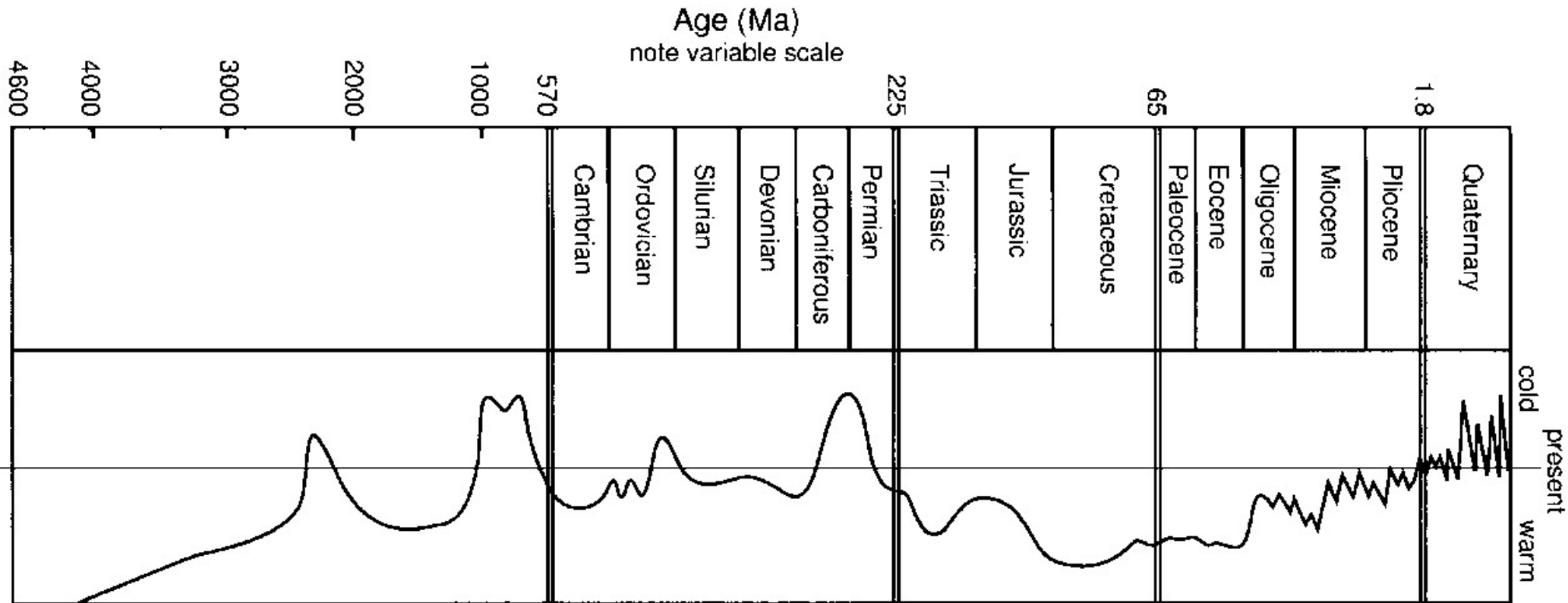


Změna globálních a kontinentálních teplot





Teplota za 4,6 miliard let



<http://math.ucr.edu/home/baez/temperature/>

The Last 20,000 Years seems to have been Ideal for the Development of Human Societies. Is this a Historic “Sweet Spot” that Enabled Humans to Flourish?

