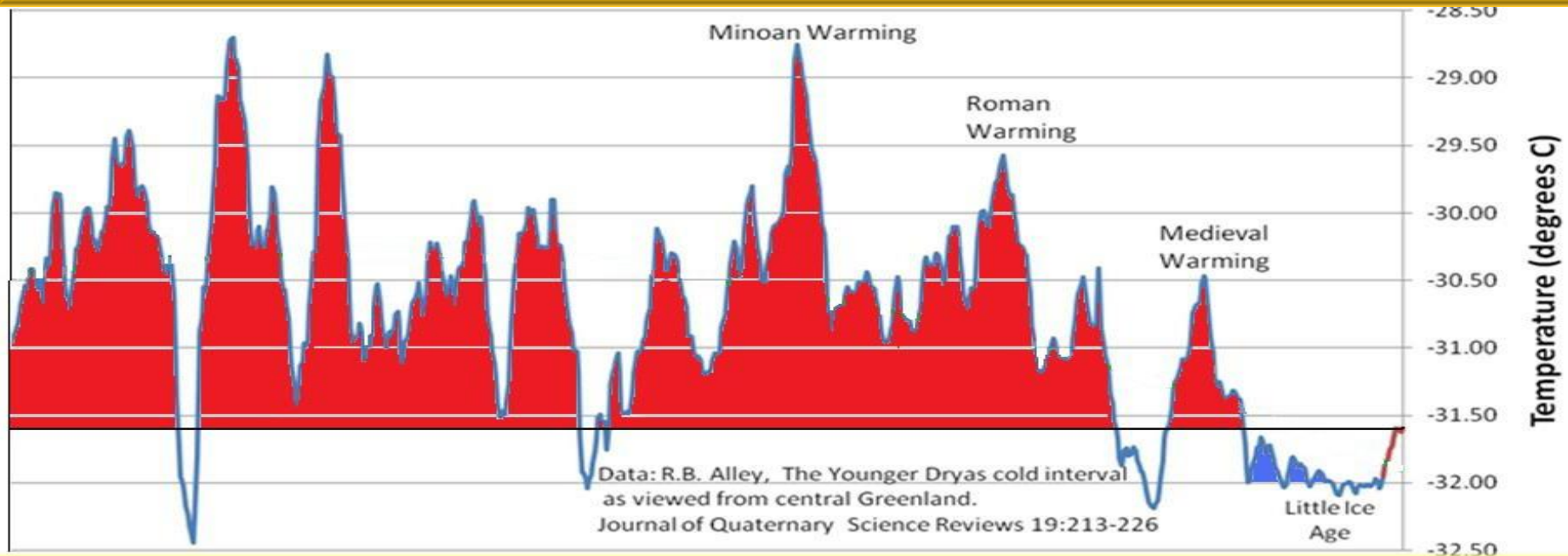


Doubting Catastrophic Anthropogenic Climate Change Scientists Look at the Data



Bob Endlich

bendlich@msn.com

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Cruces Atmospheric Sciences Forum

An Introduction: CASF

- Grass-Roots Organization <https://casf.me/casf-who-we-are/>
- Scientists from White Sands Missile Range, NMSU, Support Contractors, like-minded individuals <https://casf.me/about-casf/>
- Most: >30 years professional experience in sciences
- Laboratory / Range experience in problem-solving
- Using math and science for research, customers' projects: planning, data acquisition, analysis, reporting results
- Many have overseas experience
- Expertise in theory, environmental science, instrumentation, data collection, software

Background and Purpose of this Introduction

- Individually we doubted the global warming alarm;
shared thoughts led to forming this group.
- Media explanations made/make no sense
- 1996 Intergovernmental Panel on Climate Change report was immediately challenged by Dr Frederick Seitz, former president National Academy of Sciences:
- 1988 Senate testimony by NASA's James Hansen...
his forecast of greenhouse gas warming failed to materialize
Al Gore's 2009 forecast of Summer Arctic Ice "disappearance by 2013" was a spectacular failure

Purpose and Rationale of this Introduction

Technology and climate research have placed an immense base of knowledge on weather, climate, and environmental science at our fingertips.

By simply looking up the data, our curiosity to examine claims of coming climate catastrophe showed no basis for the climate alarm proclaimed by the International Panel on Climate Change and so-called academic and government experts.

Sharing our knowledge provides a scientifically-based block of knowledge as a community resource.

Emotion is an important human characteristic, but has no place in science.

There's no reason to spend billions of dollars to solve a non-problem. Climate catastrophe exists only in the minds of money- and power-grabbing politicians, academics, and special-interest organizations.

Purpose and Rationale of this Introduction 2

We are a data-based organization.

Our NASA brothers: “In God we Trust, all others bring data.”

No data show present temperatures, patterns of rainfall and drought, tornadoes, hurricanes, rates of sea level rise, heavy precipitation events, and rate of change of temperature are influenced significantly (or at all) by carbon dioxide, other anthropogenic gasses.

Climate forecasts are beyond the state of the art.

The equations of motion have been known for hundreds of years, but there is no way mathematics allows us to solve them.

Climate forecasts are an embarrassment to those who make them....

if you examine their accuracy and goodness.

Purpose and Rationale of this Introduction 3

- Please follow along this presentation to see an explanation of climate change based on...
- “Science and Data, not Models and Malarkey.”
- We start with Climate History over the time since fossils were widespread, since the Cambrian, 600 million years ago:

Some Basics

Climate is always changing. The issue is, compared with natural changes and history, what are the demonstrated anthropogenic and atmospheric <CO₂> effects?

The liquid-in-glass thermometer record is only ~150 years long.

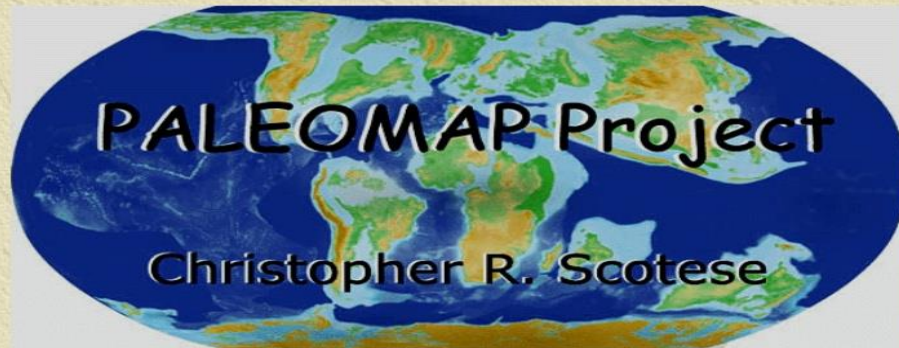
“Proxy” temperature records from Ice Cores and Tree Rings show the current warm period not nearly as warm as the Minoan Warm Period, the Roman Warm Period, and not as warm as the Medieval Warm Period, 1000 years ago, all with less CO₂.

Claims of “increasing extreme weather” from increasing atmospheric <CO₂> are belied by published records of severe and stronger tornadoes, drought history, hurricane history, extreme temperature records, fire records.

Claims of CO₂-fueled acceleration of sea level rise are belied by the tide gages which show no acceleration of rate of sea level rise since the oldest were installed in the 1850s. European history shows much higher sea levels in Medieval and Roman times.

Ice Cores, Tree Rings, and Ocean mud sediment records reveal thousand-year cycles, “Bond Cycles,” which match events in historic records.

Climate Alarmists studiously avoid discussing Bond Cycle warm periods, warmer than today with a lot less <CO₂>



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Goal of the PALEOMAP Project

- ✦ The goal of the PALEOMAP Project is to illustrate the plate tectonic development of the ocean basins and continents, as well as the changing distribution of land and sea during the past 1100 million years.

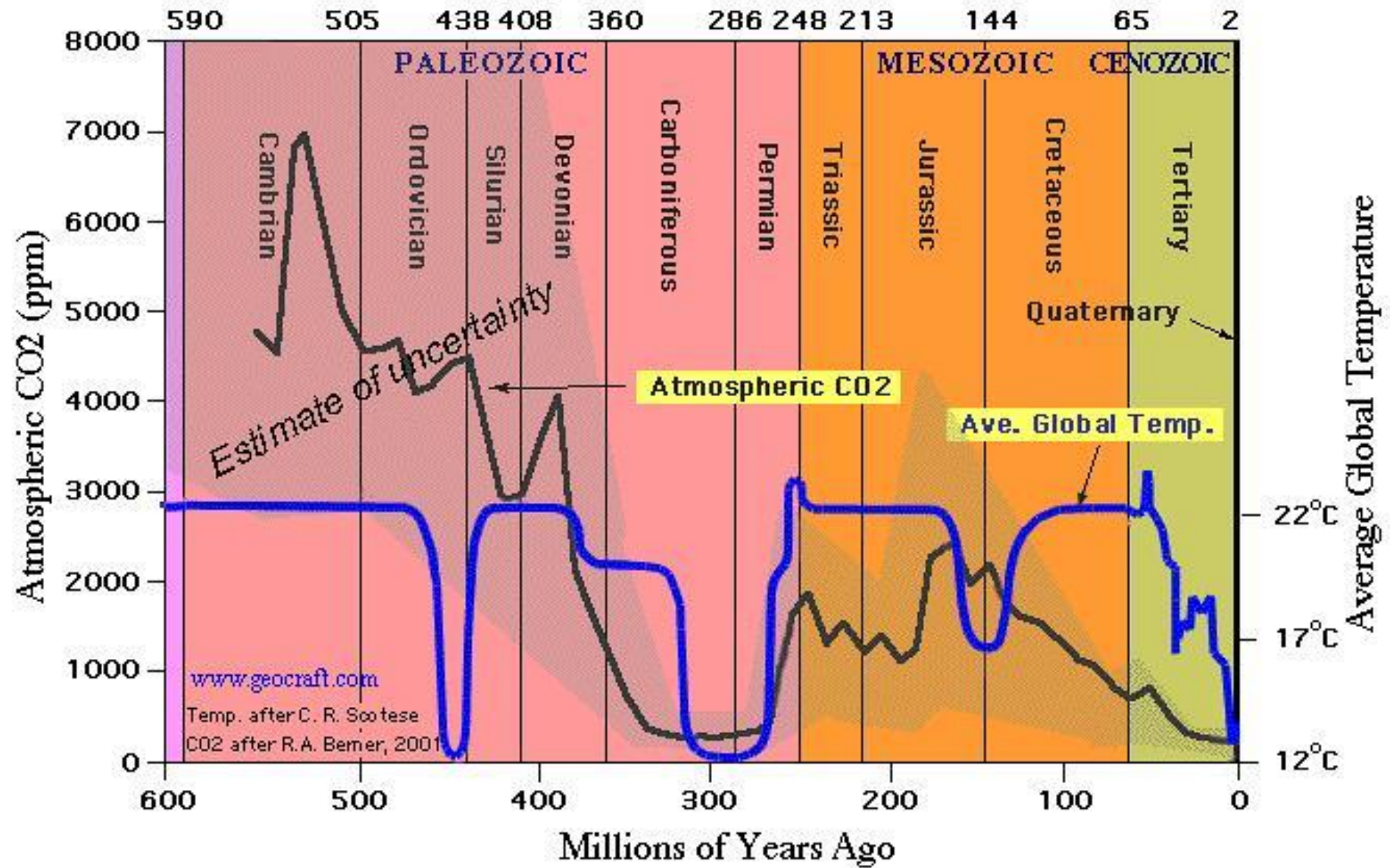
[AMERICAN JOURNAL OF SCIENCE, VOL. 301, FEBRUARY, 2001, P. 182-204]

GEOCARB III: A REVISED MODEL OF ATMOSPHERIC CO₂ OVER PHANEROZOIC TIME

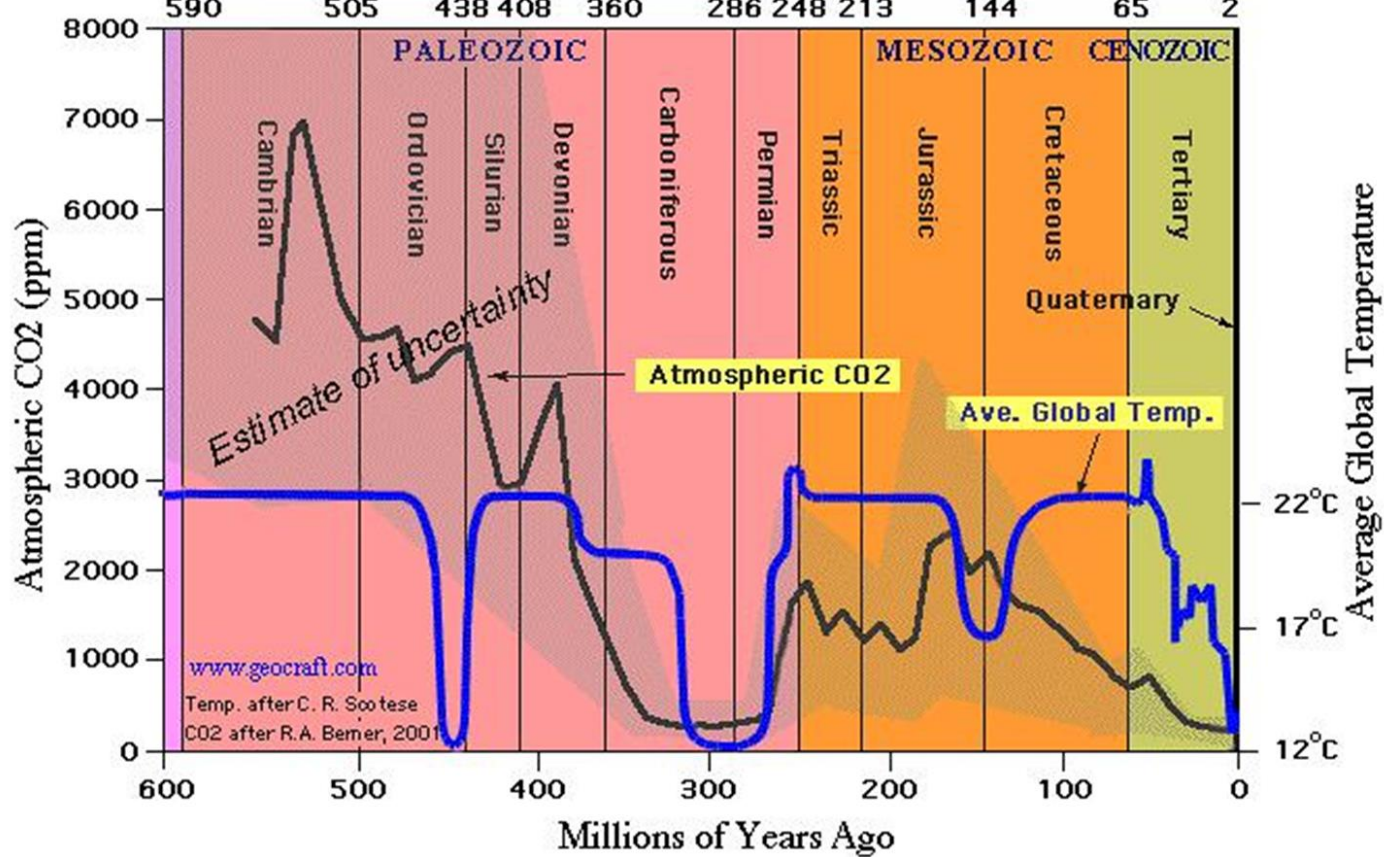
ROBERT A. BERNER and ZAVARETH KOTHAVALA

Department of Geology and Geophysics, Yale University,
New Haven, Connecticut 06520-8109

ABSTRACT. Revision of the GEOCARB model (Berner, 1991, 1994) for paleolevels of atmospheric CO₂, has been made with emphasis on factors affecting CO₂ uptake by continental weathering. This includes: (1) new GCM (general circulation model)



Over the last 600 million years, <CO2> has been decreasing. Temperatures have fallen dramatically the last ~50 million years. CO2 and temperatures are very low in historic terms.



Keeping the temperature history and CO2 history in mind, NB, earth has already done the experiment of increased CO2 and increased Temperatures many times, there's been no "tipping point," over many millions of years with higher temperatures and <CO2>.

Look at the middle - end of the Ordovician, from 475-450 millions of years ago, when <CO2> increased from 4000 to 4500 PPM. Temperatures plummeted to about the temperatures on Earth today, bringing CO2 theory into serious question.

End of Jurassic 160-150M years ago: CO2 rose, temperatures fell; CO2 theory failed again.

When Al Gore's book and movie, "An Inconvenient Truth," came out, Gore mentioned the Vostok Ice Cores.

In the years since, I became a student of the ice cores since they reveal much of climate history based on "proxy" data.

A proxy for temperature is something in the physical record which was temperature dependent in its history or makeup.

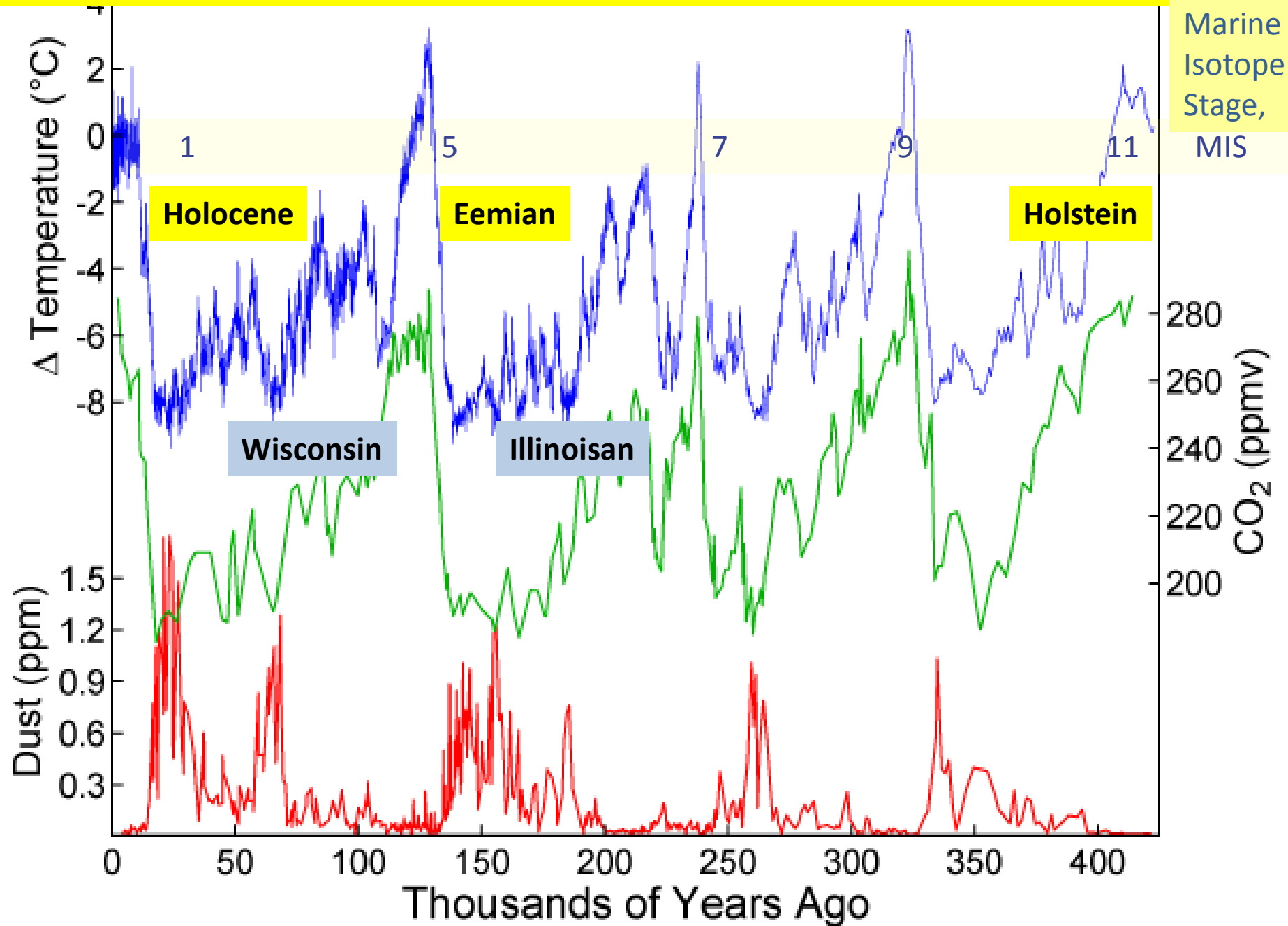
Ice is the solid form of water, ice cores represent snow which fell, was buried and compressed, yielding ice.

Water's molecule, H₂O, has one oxygen and two hydrogen atoms, both Oxygen-16 and Oxygen-18 isotopes are in the environment; heavier Oxygen-18s come out of vapor into water droplets sooner than Oxygen-16s; the Oxygen-16/Oxygen-18 ratio determines temperature.

Ice cores that follow have temperature histories derived from the Oxygen-16/Oxygen-18 ratios found in the ice itself through laboratory analysis.

Antarctica's ice is very thick; ice cores show hundreds of thousands of years of history from the annual snowfall which reaches a maximum in winter. There is a dark line of dust and dirt in summer. Ice temperature's date is determined by counting the annual deposits.

Antarctica's Temperature in Blue, CO₂ in Green and Dust in Red are plotted on the next page.



When I was a Geology Major at Rutgers, graduating June, 1962, our course of study posited that there were four ice ages in the previous 2 million years.

The Last Glacial is the Wisconsin, and the previous to that is the Illinoian, labeled in Blue on the Vostok Ice Core chart, separated by interglacials in Yellow, present interglacial is the Holocene, the previous is the Eemian, 125K years ago.

The latest estimate is perhaps 40 separate glacial periods in the past 2.5 million years; There is international agreement that instead of names, there is a global “stack” of Marine Isotope Stages according to a journal article by Lisiecki and Raymo:

Lisiecki, LE; Raymo, ME (2005): A Pliocene-Pleistocene stack of 57 globally distributed benthic $\delta^{18}O$ records. *Paleoceanography*, 20, PA1003,
<https://doi.org/10.1029/2004PA001071>

Marine Isotope Stage labels are in pale yellow.

Please study the Vostok Ice Cores in light of the notions of climate alarm proclaimed by The IPCC and the media.

Al Gore was correct on one thing, the Vostok Ice Cores clearly show climate history, and they far from confirm the alarm we hear from media, climate “scientists,” academics... the usual suspects.

Study of the Vostok Ice Cores shows the climate alarm is a false alarm.

Present $\langle \text{CO}_2 \rangle \sim 410$ Parts Per Million, or PPM; off scale high on the chart.

There are five interglacials, this one, the Holocene is the coolest by far.
If CO_2 controlled temperatures this would be the hottest, but it remains the coldest.

Within the Holocene there are a number of temperature wiggles, $\pm 2^\circ\text{C}$ fluctuations are observed; $\pm 1^\circ\text{C}$ are common. Alarmists claim that the modern warming $\sim +0.8^\circ\text{C}$ last 100 Years is unusual, portending catastrophe, the data show this variation is common in the Holocene.

Look at the temperature and CO_2 records for the Eemian beginning $\sim 140\text{K}$ years ago. The Eemian starts with low CO_2 and rises to a sharp spike, but the CO_2 spike is as short lived as the temperature spike.

Why did the Eemian temperatures stop increasing?

CO_2 theory would have the increasing CO_2 driving temperatures higher.

Why did the high CO_2 values in the Eemian peak not keep the temperatures from falling?

CO_2 theory would have the high $\langle \text{CO}_2 \rangle$ keep the temperatures from falling, but fall they did.

Later we will review Henry's Law from the early 1800s which shows that TEMPERATURE Controls CO_2 quite the opposite of the CO_2 theory claim that CO_2 controls temperature.

An Introduction: Bob Endlich

- Grew up in New Jersey; Life-long interest Earth Sciences
- Bachelor's: Geology, Rutgers, '62
- Basic Meteorology: Texas A&M, '63-64
- Master's: Meteorology, Penn State, '69
- 21 Years USAF Weather Officer
- 14 Years WSMR Atmospheric Team Leader, High Energy Lasers
- 15 Years: Military Instructor, Weather Effects on Military Systems, Software Test Engineer
- Sailplane Pilot: 500 Hours

