Can Mankind Really Expect To Tame Earth's Climate And Remove It From Cosmic Control?

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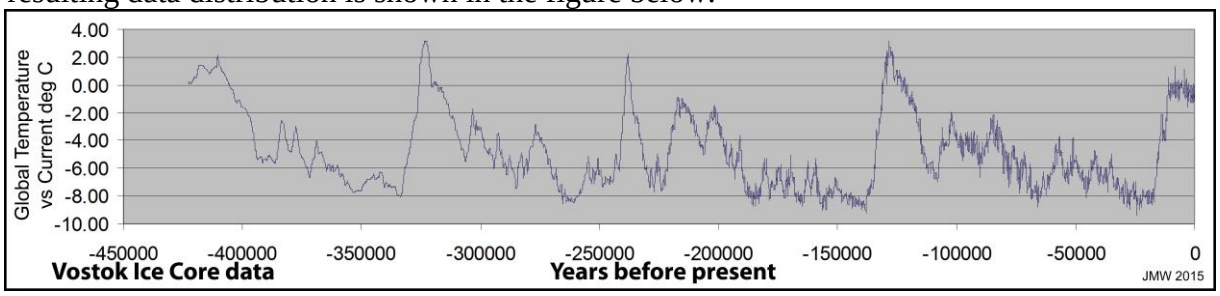
ABSTRACT

Observations about global temperatures and modeling are included. The current "global warm period" is compared to those of the previous three with each beginning at 1.5C below the current level and ending 1.5C below this level. Initial warming is rapid (roughly 2C/500-years) while cooling during the last half of the cycle is slow (roughly -2C/6000-years). Planet earth did not see the excessive warming of past cycles during the current heating. It should now be very near the end of a typical 12,000-year "global heat wave", however, since it has been in it for 11,400 years. The analyses in this paper are based on the reported Vostok Ice Core Data.

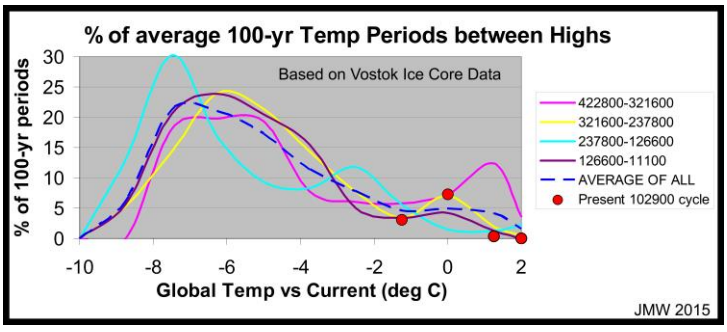
Claim (click to view): "A whopping 97 percent of all scientists agree that human activity is causing our climate to change ..... but only 40 percent of all Americans believe this because of "pseudo scientists" and special interests".

When it comes to global thermal changes, mankind has NOT been a major factor, except since the industrial revolution started in the mid-1700s AD. While global thermal data for distant past is difficult to obtain, the Vostok Antarctic Ice Core data[1] at least provides a view of the past 422,800 years. I sorted the Vostok Antarctic Ice core data into 4228 100-year bins and then averaged the bins. Where there was no datum in a bin, the bin was visually interpolated from the data in adjacent bins. The resulting data distribution is shown in the figure below.



Mankind's "free roaming range" during these global thermal cycles is presented in a YouTube 2'54" video (click to view). Info on the generation of this video is presented in *"The Molding of Mankind - Planet Earth in a Thermal Vise"* (click to download).

The figure on the right shows smooth curves through the percentage of the thermal data that falls into 11, evenly divided, thermal portion for each high-to-high temperature cycle (~100,000-year) of the Vostok data. The dashed blue line show the average % of global temperature levels of all four cycles.



Where are we in the global thermal vise? The last 11,400 years have consumed almost all of the warm temperatures for the next cycle - the red dots in the figure. With 89% of the current ~100,000-year cycle remaining, global temperatures will get colder and downright raw at the cycle's perigee (~ - 8°C relative to the current global temperature). The global thermal clamp will continually put more restrictions on agricultural crop (food) production. Concern about global warming is interesting in that human activity of the "global warming" nature will actually prolong the current thermal period! As crop production diminishes, so will the world's

population. Energy to keep the remainder warm will decrease simply because there will be fewer people to supply it AND maintain its distribution! Lodging will deteriorate. What will last through the next perigee? In a 100,000 years, WE will be the "ancient aliens" that currently get TV hype! How do the proponents of climate control plan to get mankind to the next warm spell - about 100,000 years from now? Mankind needs to be thinking about how to feed and heat itself for a 100,000 years of cold climate. Droughts, etc now are minor compared to what mankind will face down the road.

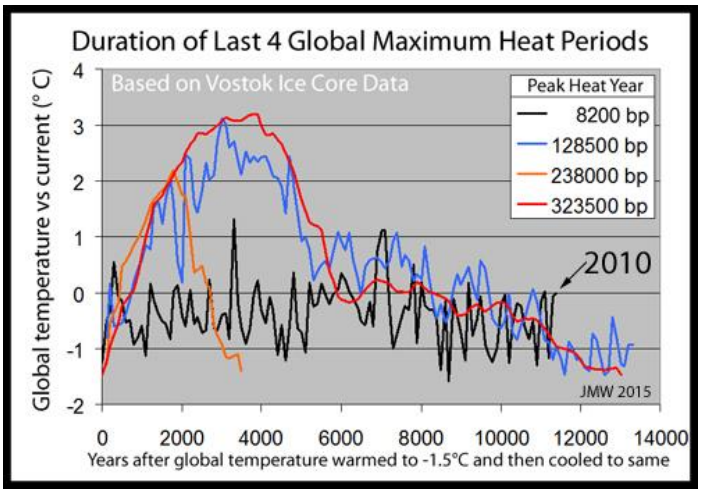
The short-term (a decade or two ahead?) climate changes are what "scientific" folks are focusing on.

Cleaning up the environment to make life livable is one thing: for example, cleaning up the air in steel mill towns and that emitted from uncontrolled, coal-fired, electricity generating stations and the water in streams in mining areas, etc., etc. Controlling the climate of the earth is a bit "bigger" task! And, as John Bartlit of NM Citizens for Clean Air and Water has pointed out in *"Value Variable Weather"* (click to access), who gets the favorable climate at the expense of the rest?

Current global temperatures are relatively constant compared to the long-term trend. Ice caps are responding to calories already deposited to oceans (it takes a while for massive chunks of ice to respond - think about ice cubes in water and about how cold that water eventually gets when those ice cubes are turned to water).

What I see is that the advocates of humans making global temperatures unacceptably warmer are NOT looking at the long-term, but rather at the short--term. A question: Is the green-house effect of CO_2 countering a natural cooling that the earth might already have begun to experience and thus is giving mankind some "extra" warm years? *"A Look On the Brighter Side of Global Warming"* (click to view) highlights some of the presentations given in the conference held in Santa Fe this past weekend. Knowing how to create some warmth may be to mankind's benefit! For how long, however?

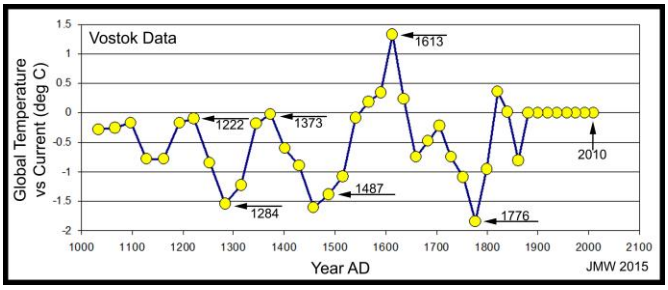
The figure on the right gives a view of how the current global "heat wave" compares to the previous three. The duration periods of the past 3 and the current global periods of temperatures are started, for the comparison, 1.5°C below the current level and continue until they drop back to that level. The rise is rapid (roughly 2C/500-years), whereas the fall during the last half of the cycle is slow (roughly minus 2C/6000-years). Based on the two broad heat periods, we are nearing the end of our current warm period.



Readers might want to acquaint themselves with the broad picture as well as short-term "pitches" of "Global Warming" alarm. Mankind's recorded history only covers a few millennia and the temperature changes during this period have been minor compared to those over a millennia of millennia! By and large, we think about today, tomorrow, next week and maybe some decades into the future.

Even if mankind can dramatically manage climate behavior during our current, "relatively smooth", warm period, what are the prospects of taming the "extreme" periods - namely, extremely long Big Chills? What technologies should mankind be working on to sustain even a modest population level during the major part of the next 100,000-year cycle? What will induce mankind to act? And when?

Advocates for an urgent need to control the climate might claim that the trend in recent years is sharply upward and thus more critical than expected from my graphs that represents changes for centuries. Consider the global thermal temperatures for the last 1000 years that are presented in the figure on the right. Columbus sailed the seas to "the new world" as global temperatures rose in 1492; Washington's troops had a cold 1777 at Valley Forge. Interestingly, the reported Vostok core data[1] indicates that global temperatures have been fairly constant over the past century! Strange? A problem analyzing the topmost layers? One would have expected more variation.



Do current models, such as the "Global Change Assessment Model"[2], which makes 5-year predictions from 1990-2095 for "global mean temperature rise" (note *rise*, not *change*), ***precisely match*** the **past 400,000 years of global temperature changes** on a century-level? If these models do not generate the observed, century-average behaviors precisely, their accuracy in making yearly, 5-year or decade predictions are suspect. What does the comment[3] that the "***discrepancy between models and actual temperatures in the last 10 years have been resolved ..... It isn't warming quite as fast as the model said*** ..... *because of a countervailing (cooling) ocean cycle*" say about such modeling? Remember "ice-cubes-in-water"? Takes quite a while for the oceans to warm enough to break off gigantic chunks of ice from the polar regions. But after the oceans begin to cool, ...

SUMMARY

I assume that I would be included among the "scientists". I spent a number of years studying environment pollution related to coal and uranium wastes for EPA and DOE at the Los Alamos National Laboratory. Depending on how the questions are phrased, I might be included with the "97%" that say mankind is causing "our climate to change". I suspect that "climate change" and "environmental pollution" are not very well delineated. Air pollution that extends 10s of thousands of feet upwards is hard to miss. I went through Gary, IN, back in the 1960s when the sky was bright orange and the sun set well before it went below the horizon. Media often show citizens of Beijing wearing masks because of the extremely poor air quality. Citizens of Beijing would very likely say that "human activity" is changing their "climate". These are examples of mankind's polluting the environment and not of global climate changes per se. The greenhouse effect of CO_2 generated by massive levels of coal and petroleum combustion to produce electricity makes common scientific sense. It is the magnitude of the effect of such pollutions on a global scale that is the issue. Having delved into the matter, it is not clear that we are destined for a 2°C rise over the current global level when the natural repetitive cycle should be in the declining stage of a 100-century thermal cycle. One might ask this question: what would the average global temperature be "right now" if all of the CO_2 generated by mankind in the last 300 years were "instantaneously" removed from the atmosphere? The answer *might be* chillier! There is NO DENYING that human activities are polluting of the environment, however! Pollution IS something mankind can moderate! Global climate?

REFERENCES

[1] The data available from CDIAC represent a major effort by researchers from France, Russia, and the USA; Jouzel and others in these refs - Nature 329:403-8 (1987), Nature 364:407-12 (1993), Nature 399: 429-436 (1999) and Climate Dynamics 12:513-521 (1996); http://cdiac.ornl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat

[2] *Climate Change,* http://www.epa.gov/climatechange/EPAactivities/economics/modeling.html

[3] Keller, C., in *A Look On The Brighter Side Of Global Warming,* http://www.ladailypost.com/content/look-brighter-side-global-warming