Overlooked and missing science which shows that added atmospheric carbon dioxide has no significant influence on average global temperature.

**using both carbon dioxide and temperature data**

There is only one complete and exact computer of global climate and that is the planet itself. By definition it complies with all laws of nature. Einstein said “No number of tests can prove I’m right but only one is needed to prove I’m wrong”. That one test, (actually there have been many) that proves to be wrong the theory that added atmospheric carbon dioxide causes significant global warming, was run on the planet computer and the results are archived in the Vostok ice cores that have been extracted from Antarctic glaciers.

To effectively use the ice core data it is helpful to define what is meant by a trend. Trends must be for a long enough time to average out cyclic variation from random noise and other factors such as the El Niño southern oscillation (ENSO), Atlantic Multidecadal Oscillation (AMO), and the Pacific decadal oscillation (PDO). To avoid question they should also be substantially longer than any smoothing period that was employed in generating the data set. Thus a trend would be for many hundreds or even thousands of years.

Numerical data of temperature change (called anomalies) were determined using proxies from the Vostok, Antarctica ice cores and are available at [http://cdiac.ornl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat](http://cdiac.ornl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat). These data are graphed here:

![Vostok Temperature Change](image)

Atmospheric carbon dioxide level extracted from Vostok ice cores is available as numerical data at [http://cdiac.ornl.gov/trends/co2/vostok.html](http://cdiac.ornl.gov/trends/co2/vostok.html). This was scaled (amplitude only) to overlay the average global temperature (agt) anomalies on the graph below.
One of the immediate observations from this graph is that atmospheric carbon dioxide level change often lagged temperature change by hundreds of years.

Notice especially that repeatedly during the last glacial period a temperature increasing trend changed to a decreasing trend with the atmospheric carbon dioxide level higher during the temperature down-trend than it had been when the temperature trend was increasing (the same is true for previous glacial periods). This proves that, at least then, atmospheric carbon dioxide (and/or methane since it tracks the carbon dioxide) did not significantly influence agt.

Lacking any other knowledge one might think that if the atmospheric carbon dioxide level increases enough it may then significantly drive temperature. However, it is well known that added increments of carbon dioxide have less influence than previous increments (logarithmic decline in effect). Since there is more carbon dioxide in the atmosphere today than during the glacial periods, added increments of carbon dioxide today have even less influence than the same size increments did during the glacial periods when they did not drive temperature. Thus added atmospheric carbon dioxide today does not drive temperature. Anthropogenic (human caused) global warming, AGW, which is based on increased atmospheric carbon dioxide, is a mistake.
Assessment using only temperature data

There is only one complete and exact computer of global climate and that is the planet itself. By definition it complies with all laws of nature. Einstein said “No number of tests can prove I’m right but only one is needed to prove I’m wrong”. That one test, (actually there have been many) that proves to be wrong the theory that added atmospheric carbon dioxide causes significant global warming, was run on the planet computer and the results are archived in the Vostok, EPICA and Dome Fuji ice cores that have been extracted from Antarctic glaciers.

To effectively use the ice core data it is helpful to define what is meant by a trend. Trends must be for a long enough time to average out cyclic variation from random noise and other factors such as the El Niño southern oscillation (ENSO), Atlantic Multidecadal Oscillation (AMO), and the Pacific decadal oscillation (PDO). To avoid question they should also be substantially longer than any smoothing period that was employed in generating the data set. Thus a trend would be for many hundreds or even thousands of years. The record does not even need to be correct in absolute terms just reasonably accurate in relative terms.

Numerical data of temperature change (called anomalies) were determined using Deuterium proxies from the Vostok, Antarctica ice cores and are available at [http://cdiac.ornl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat](http://cdiac.ornl.gov/ftp/trends/temp/vostok/vostok.1999.temp.dat). These data are graphed here:

![Vostok Temperature Change](image)

Similarly the Deuterium proxy numerical data from the European Project for Ice Coring in Antarctica (EPICA) which is available at [ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/antarctica/epica_domec/edc_dd.txt](ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/antarctica/epica_domec/edc_dd.txt) when converted to anomalies and scaled linearly to approximately match the Vostok data are graphed below.
Also similarly the Deuterium proxy numerical data from Dome Fuji, Antarctica which is available at ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/antarctica/domefuji/df-tsite-340ka-dfo2006.txt are graphed below.

Those who understand Control Theory (CT) have the tool to recognize that earth’s climate can be evaluated as a dynamic system with feedback. Since the sun is the only significant energy source, the model is quite simple. The input (to the control/plant) is the insolation (energy from the sun) combined with feedback from average global temperature (agt). The control/plant includes all factors that influence agt.

The factors do not need to be explicitly defined. All of the minutia of weather and climate whether known or not get lumped together (in the control/plant). The output is agt. It is not necessary to explicitly describe any of the factors in the control/plant to determine, using the climate record archived in the Vostok ice cores, whether net feedback, if significant, is positive or negative.

As observed on these graphs, repeatedly during the last and previous glacial periods, a temperature increasing trend changed to a decreasing trend and vice versa. This is not possible if there is significant net positive feedback from temperature.
Atmospheric/Oceanic General Circulation Models, AOGCMs, include the circulation effects of atmosphere and ocean. Climate Scientists use these global climate models to predict future climate. Although there may be no explicit input parameter for feedback in the AOGCMs, when used to predict future climate they incorporate features that result in significant net positive feedback. Without significant net positive feedback AOGCMs do not predict significant global warming. Zero feedback results in 1.2°C from doubling of atmospheric carbon dioxide per p631 of ch8 of UN IPCC AR4 (this 5.84 mb pdf file can be downloaded from http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_Ch08.pdf). This IPCC prediction is probably still high because of faulty cloud parameterization, etc. Unless overwhelmed by other factors, an insignificant temperature increase of less than a degree Celsius, most of which has already taken place, is expected from doubling atmospheric carbon dioxide from the pre-industrial-revolution level of about 275 ppmv.

Most Climate Scientists are unaware of the science of Control Theory (a graduate level subject in certain engineering disciplines) which helps explain why they have not recognized the significance of the above assessment. There is no academic requirement for Climate Scientists to learn about CT. As a result, many climatologists are unaware of that part of science which proves that significant net positive feedback from temperature does not exist in earth’s climate.