

## APPEAL TO AUTHORITY

The single greatest failure of science is what philosophers call “appeal to authority”, whereby the stature of a person allows statements made by that person to be taken as absolute fact when such statements are only opinions based on perception and have never been verified.

Einstein’s equation  $e=mc^2$  is just as valid if stated by Al Gore as by Steven Chu, but only Chu would understand how this equation applies to  $\text{CO}_2$  and climate change, and Al Gore would only be able to accept what Chu states without being able to, or wishing to, question what is stated.

This well known equation forms the basis for quantum physics by giving photons an equivalent mass dependent on their energy.

Quantum physics defines the process that is involved with the interaction between atmospheric  $\text{CO}_2$  and thermal radiation from the Earth. Since the  $\text{CO}_2$  molecule is linear and symmetrical there is no permanent dipole moment and the only dipole moment that can be achieved is through vibration caused by only a narrow band of thermal energy radiated by the Earth centred at a resonant wavelength of 14.77microns.

These photons cause vibration of the  $\text{CO}_2$  molecule as they are absorbed, and this vibration stops by radiating out a new identical photon in some random direction, and all of this is done with no net energy transfer (and therefore no heat transfer as is often stated). The new photon encounters another  $\text{CO}_2$  molecule and the process is repeated until a photon either returns to the Earth and is absorbed permanently, or escapes into space.

The statistics of this process are such that no matter what the concentration of  $\text{CO}_2$ , about a third of the thermal energy in this band will eventually escape into space. At very low concentrations  $\text{CO}_2$  has an immediate and full effect on the central resonant wavelength, but as concentration increases the additional effect becomes less and less as wavelengths further away from the central resonant wavelength are affected.

At a concentration in the order of 300ppmv, most of the effect from  $\text{CO}_2$  on the thermal radiation from the Earth has been achieved. This is demonstrated by this radiative spectrum measured by the Nimbus 4 Satellite back in 1970 when the atmospheric concentration was 325ppmv.

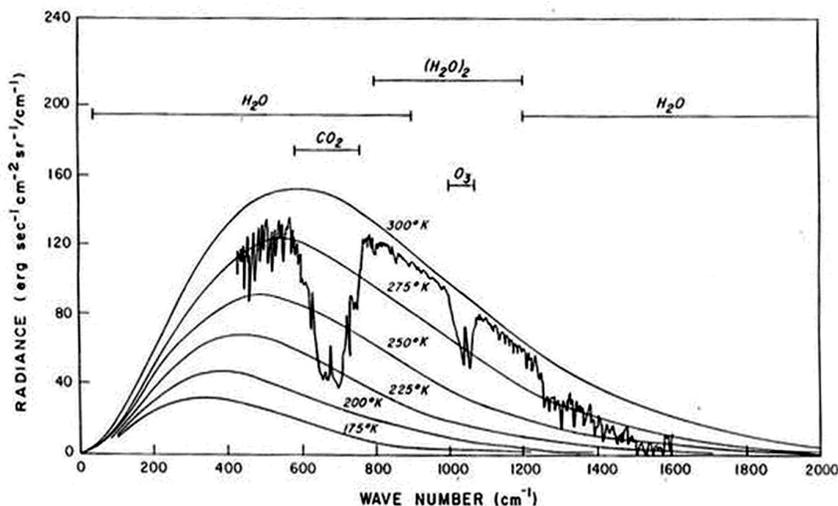
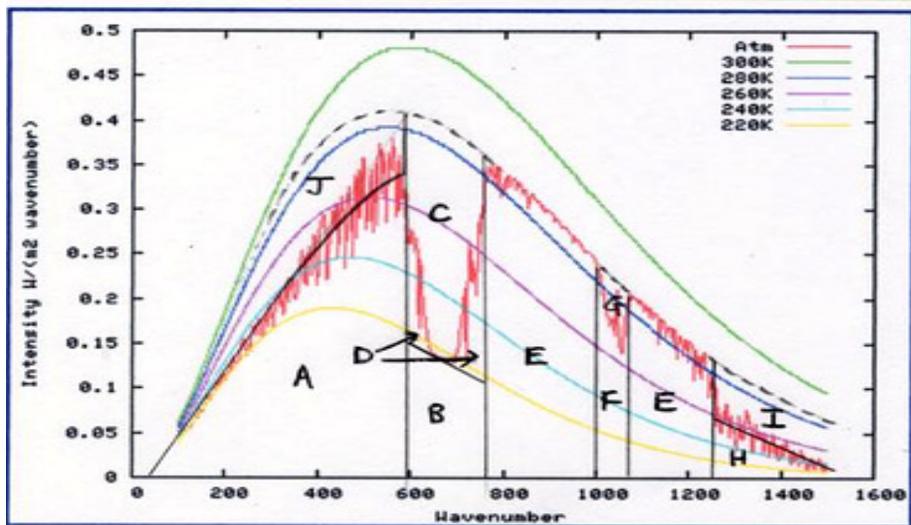


Fig. 4.1 The terrestrial infrared spectra and various absorption bands. Also shown is an actual atmospheric emission spectrum taken by the Nimbus IV IRIS instrument near Guam at 15.1 N and 215.3 W on April 27, 1970.

The limitations of CO<sub>2</sub> are well explained in the following graph from Jack Barrett.



The area “B” represents energy that will always escape regardless of concentration, the area “C” represents the energy that is blocked from escaping and the area “D” is all the remaining energy that can be blocked regardless of the concentration of CO<sub>2</sub>.

In numerical terms the current total effect from CO<sub>2</sub> represents less than 3.4°C of the total greenhouse effect of about 34°C. Since the area “D” is less than 20% of area “C”, no more than an additional 0.68°C of effect can be achieved from further increases in CO<sub>2</sub>, and a doubling of CO<sub>2</sub> can only have an effect that is just a fraction of this 0.68°C; not the 2°C to 5°C calculated by the climate models of the IPCC.

When Arrhenius developed his theories about the effect of CO<sub>2</sub> on the global temperature he did not have the benefit of Quantum Physics to define the process, and falsely assumed an incorrect relationship.

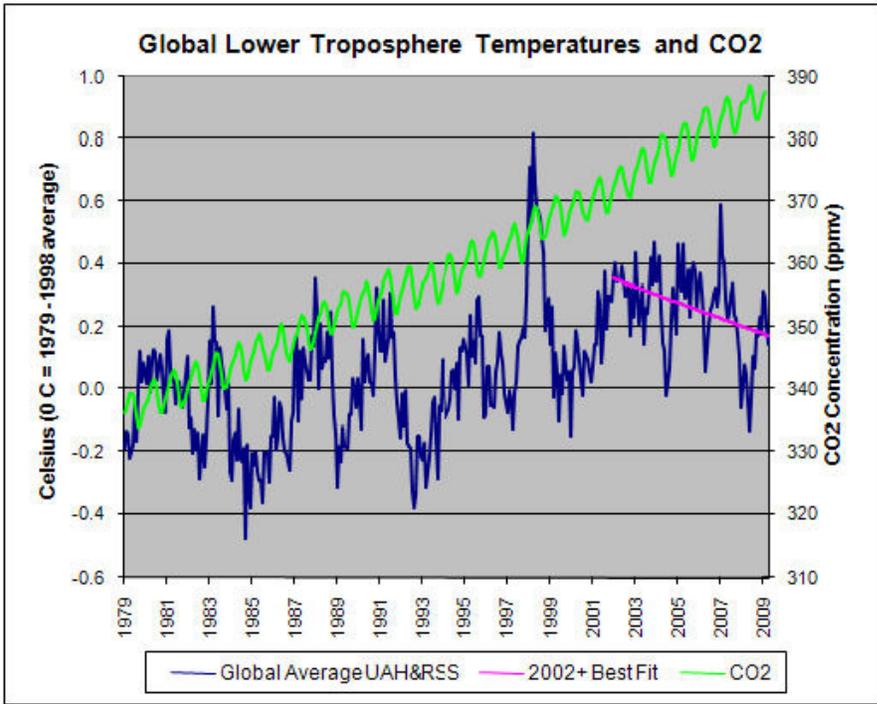
The IPCC models are based on the assumptions of Arrhenius and use an artificially contrived “CO<sub>2</sub> forcing parameter” based on the Arrhenius supposition relating 0.6°C of observed warming directly to a 100ppmv increase in atmospheric concentration. Not only does this parameter ignore quantum physics in its construction, it relates the entire 0.6°C of warming directly to CO<sub>2</sub> increases without subtracting the 0.5°C of natural warming since the Little Ice Age; essentially creating a parameter for the effect of CO<sub>2</sub> that is six times too large.

The entire climate change issue is nothing more than compounded “appeal to authority”.

First Hansen used the authority of Arrhenius, then the IPCC used the authority of Hansen, then Gore used the authority of the IPCC, and now Chu has also used the authority of the IPCC and completely ignores his own fundamental knowledge that won him the Nobel Prize for Physics (ironically for investigations into a similar process).

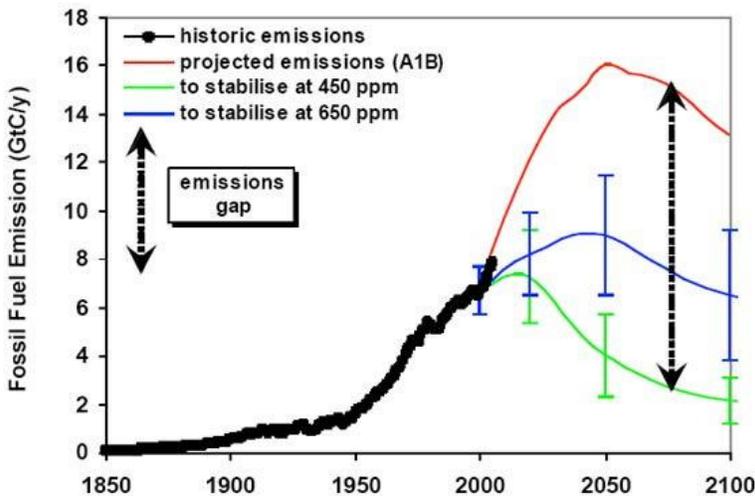
This is where the “appeal to authority” has to stop, because the President does not have the background to even question Chu about the validity of this conjecture.

There is irrefutable data that clearly demonstrates that the world has been cooling since 2002, even as CO<sub>2</sub> emissions continue to rise as demonstrated by this graph of raw monthly global temperature data and atmospheric CO<sub>2</sub> data.

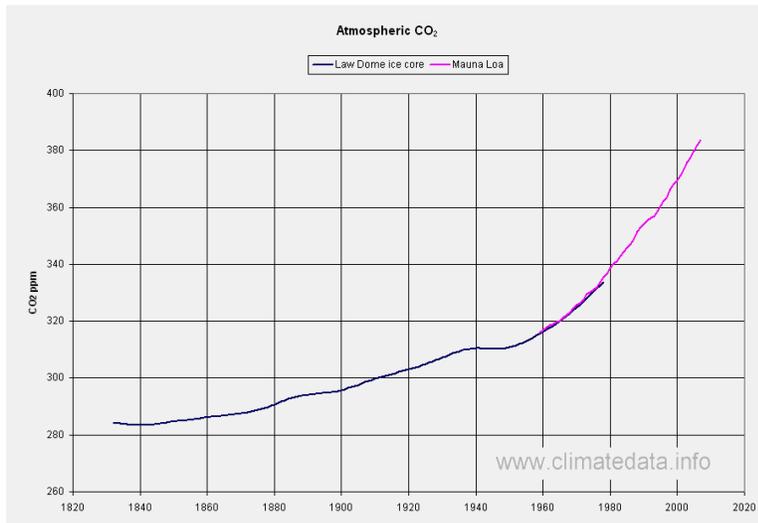


Also present on this graph is clear indication that the atmospheric concentration of CO<sub>2</sub> showed no reversal from 1979 to 1982 even though there was a reduction in CO<sub>2</sub> emissions over this time period as a result of conservation efforts because of the skyrocketing oil prices of the time.

At the 2006 IPCC Climate Conference in Nairobi, this graph was presented to demonstrate the need for drastic action to reduce CO<sub>2</sub> emissions. What this graph does show, is that the IPCC base their projections on emissions under the false assumption that concentration increases are directly and primarily due to emissions from fossil fuels. This is clearly and demonstrably false because the reversal in emissions from 1979 to 1982 shown on this graph is not present on graphs of atmospheric CO<sub>2</sub> concentration over this same time frame, indicating that increases in emissions are not the primary or even a significant source for the increase in atmospheric CO<sub>2</sub> concentration.



The following graph is the annual averaged CO<sub>2</sub> concentration. Notice that there is no reversal in concentration at the point where the curve crosses the grid line for 1980 where the emissions curve shows a reversal.



There is absolute and irrefutable proof that the Earth is cooling in spite of the continued increase in atmospheric CO<sub>2</sub> falsifying the conjecture that increasing CO<sub>2</sub> is the dominant driver of global warming.

There is absolute and irrefutable proof that CO<sub>2</sub> emissions are not a major contributor to the increase in the concentration of atmospheric CO<sub>2</sub>, and therefore have no measurable effect on climate, even if there was a significant effect from CO<sub>2</sub>.

As a scientist of Nobel Prize winning stature, by “appealing to authority”, Steven Chu has committed a serious breach of science protocol. In light of this evidence and more importantly because of the position of trust that Chu holds with the President, it is imperative that Chu ignore all the dogma and rhetoric and go back to his basic knowledge of quantum physics and expose this sham for what it is, and properly advise the president on this issue.

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