Email von

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Do., 3. Aug., 01:05 (vor 9 Tagen)

Dear Johannis,

I hope it is all right to use your first name, a US custom that implies no disrespect.

Let me respond to these words from your note. I realize you are simply paraphrasing the arguments of others:

"The second group argues that Dr. Clauser is just an experimental physicist on quantum mechanics 50 years ago, an old man that has no idea and in-depth knowledge of modern climate science. "

This reminds me of Sganerelle's famous response to Géronte, who was puzzled by the sketch of a human patient with the heart on the right and the liver on the left:

> GÉRONTE
> On ne peut pas mieux raisonner, sans doute. Il n'y a qu'une seule chose qui m'a choqué : c'est l'endroit du foie et du cœur. Il me semble que vous les placez autrement qu'ils ne sont : que le cœur est du côté gauche, et le foie du côté droit.
> SGANARELLE
> Oui, cela était autrefois ainsi ; mais nous avons changé tout cela, et nous faisons maintenant la médecine d'une méthode toute nouvelle.

Until about 1980, many of the most prominent climate alarmists were promoting catastrophic "global cooling," not global warming. An example is the late Steve Schneider, who will almost certainly be canonized by the climate cult for his exceptional missionary work. Remember not the sins of our youth! But in the attached paper, published in 1971, Scheider wrote:

> *"From our calculation, a doubling of CO2 produces a tropospheric temperature change of 0.8°K. However, as more CO2 is added to the atmosphere, the rate of temperature increase is proportionally less and less, and the increase eventually levels off. Even for an increase in CO by a factor of 10 the temperature increase does not exceed 2.5°K. Therefore the runaway greenhouse effect does not occur because the 15 micron CO2 band, which is the main source of absorption, "saturates," and the addition of more CO2 does not substantially increase the infrared opacity of the atmosphere. But if the CO2 concentration in the atmosphere becomes so high that the total atmospheric pressure is affected (which will require a CO2 increase by a factor of 1000 or more), then the absorption bands will broaden, the opacity will increase, and the temperature may start to rise so rapidly that the process could run away (13). However, this appears to be only a remote possibility for Earth, even on a geological timescale, as a large build up of CO2 in the atmosphere will be severely restrained by its interaction with the oceans, the biosphere, and the crust.*
>
> *The main conclusion of this part of the study is that even an order of magnitude increase of CO2 in the atmosphere by human activities, which at the present rate of input is not expected within the next several thousand years, may not be sufficient to produce a runaway greenhouse effect on Earth. On the short time scale, if CO_2 is augmented by another 10 percent in the next 30 years, the increase in the global temperature may be as small as 0.1°K."*

What Schneider wrote was true in 1971 and it is true in 2023, even though Schneider and "the second group," insist that "it used to be that way, but we have changed all of that and we are doing climate science with an entirely new method."

Turning now to the hard physical facts that Schneider and Rasool correctly summarized in 1971, I think they are consistent with John Clauser's claim that clouds are 100 times more effective than greenhouse gases.

The key quantity for understanding how Earth's radiation effects climate is the "radiative forcing," caused by greenhouse gases, clouds, etc. The absolute radiative forcing from thermal (long wave infrared) radiation is the difference between the radiation to space from a hypothetical Earth with no greenhouse gases and a completely transparent atmosphere, and the real earth with its cloudy, humid, CO2 -filled atmosphere. The forcing from short wave solar radiation has an analogous definition, the difference between the solar radiation absorbed by the Earth's real atmosphere, as opposed to being diffusely scattered back to space, and the solar radiation absorbed by a hypothetical Earth with a completely transparent atmosphere. Most people think that temperature changes will be proportional to forcing changes.

I think that John's point is that a 1% change of low cloud cover will reflect about 1% more solar radiation back to space. On the other hand, as Rasool and Schneider discovered, the CO2 absorption band is so heavily saturated that to decrease thermal radiation to space by 1% you have to increase the CO2 concentration by 100%, (you have to double the concentration.)

I would be glad to get into more details if you like, but I hope this brief response will be helpful. Sometimes "less is more."

Best wishes,

Will