“The Sky is Falling!”

– Chicken Little

Chicken Little Story – FairyTales.info https://www.fairytales.info/chicken-little-story/

I won’t be telling you anything that contradicts climate science as taught by MIT
I won’t be telling you something you don’t already know—atmospheric energy is carried by water vapor.
A partial truth can be a whole lie. In this case, the “partial” is less than 1% of “the truth”…much less.

MIT references from MIT’s EdX on Climate Science by Dr Kerry Emanuel (mit.edu)

Dr. Richard Siegmund Lindzen

Not mentioned in the letter is the fact that current carbon dioxide levels, around 400 parts per million are still very small compared to the averages over geological history, when thousands of parts per million prevailed, and when life flourished on land and in the oceans.

Twenty five years after the establishment of the United Nations Framework Convention on Climate Change (UNFCCC), set up to validate the case for dangers from increasing carbon dioxide, the risks referred to in the departmental statement remain, hypothetical, model-based projections. By contrast, the benefits of increasing CO2 and modest warming are clearer than ever, and supported by dramatic satellite images of a greening Earth.

We note that:

- The UN's Intergovernmental Panel on Climate Change (IPCC) no longer claims greater likelihood of significant as opposed to negligible warming,
- That it has long been acknowledged by the IPCC that climate change prior to the 1960's could not be due to anthropogenic greenhouse gases,
- That model projections of warming during this period have greatly exceeded what has been observed,
- That the modelling community has openly acknowledged that the ability of existing models to simulate past climates is due to numerous arbitrary tuning adjustments,
- That observations show no statistically valid trends in flooding or drought, and no meaningful acceleration of very long term sea level rise (about 6 inches per century),

Therefore, calls to limit carbon dioxide emissions are more premature today than 25 years ago.

From Lindzen to MIT

Richard Siegmund Lindzen (born February 8, 1940) is an American atmospheric physicist known for his work in the dynamics of the middle atmosphere, atmospheric tides, and ozone photochemistry. He has published more than 200 scientific papers and books. From 1983[1] until his retirement in 2013, he was Alfred P. Sloan Professor of Meteorology at the Massachusetts Institute of Technology.[2] He was a lead author of Chapter 7, "Physical Climate Processes and Feedbacks," of the Intergovernmental Panel on Climate Change's Third Assessment Report on climate change.

https://www.youtube.com/watch?v=7LVSrTZDopM

https://m.youtube.com/watch?v=IOKElp_jGLQ&pp=QAFIAQ%3D%3D

RichardLindzenMIT responseMarch6 – DocumentCloud

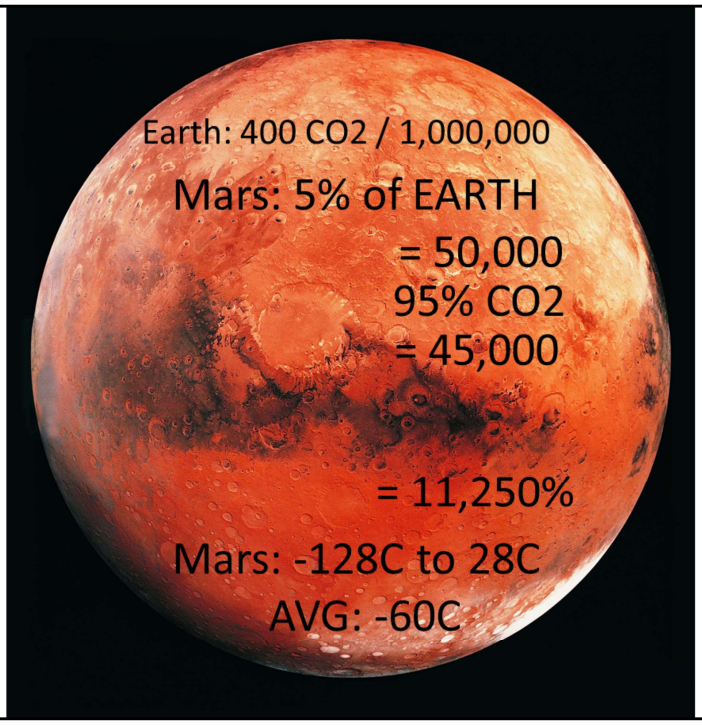
www.documentcloud.org/documents/3492951-RichardLindzenMIT-responseMarch6

Home - Global Warming Petition Project (oism.org)

*Statement to the U.S. Senate Environment and Public Works Committee by **William Happer**, Cyrus Fogg Brackett Professor of Physics Princeton University, made on February 25, 2009.*

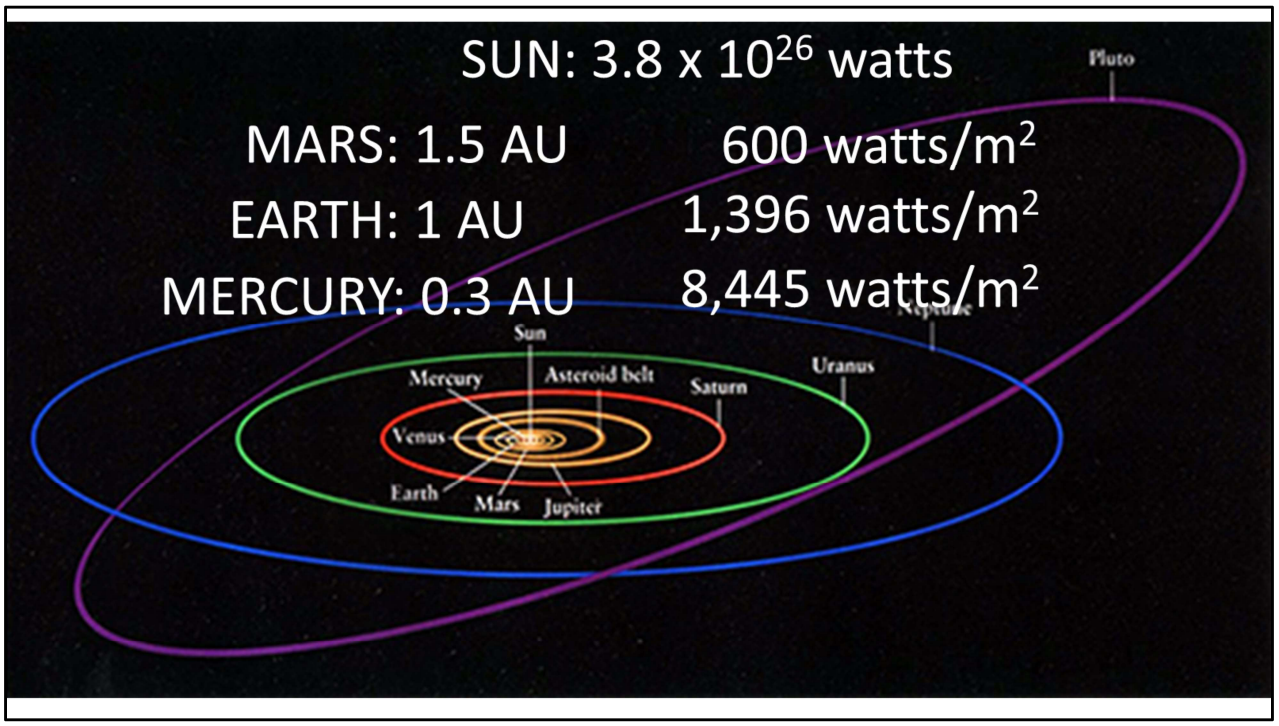
- I have spent my professional life studying the interactions of visible and infrared radiation with gases – one of the main physical phenomena behind the greenhouse effect.
- I believe that the increase of CO2 is not a cause for alarm and will be good for mankind.
- Drastic limitations on CO2 are likely to damage our country
- what about the frightening consequences of increasing levels of CO2 that we keep hearing about? In a word**, they are wildly exaggerated**,
- **at least 90% of greenhouse warming is due to water vapor and clouds**. **Carbon dioxide is a bit player**. There is little argument in the scientific community that a direct effect of doubling the CO2 concentration will be a small increase of the earth's temperature — on the order of one degree. Additional increments of CO2 will cause relatively less direct warming because we already have so much CO2 in the atmosphere that it has blocked most of the infrared radiation that it can.
- the current warming period began about 1800 at the end of the little ice age, long before there was an appreciable increase of CO2.
- The existence of climate variability in the past has long been an embarrassment to those who claim that all climate change is due to man and that man can control it.

Global Warming and Climate Change in Perspective: CO2, Scientific Consensus, and Climate Models by William Happer | Capitalism Magazine
https://www.capitalismmagazine.com/2009/04/global-warming-climate-change-in-perspective-co2-scientific-consensus-and-climate-models/

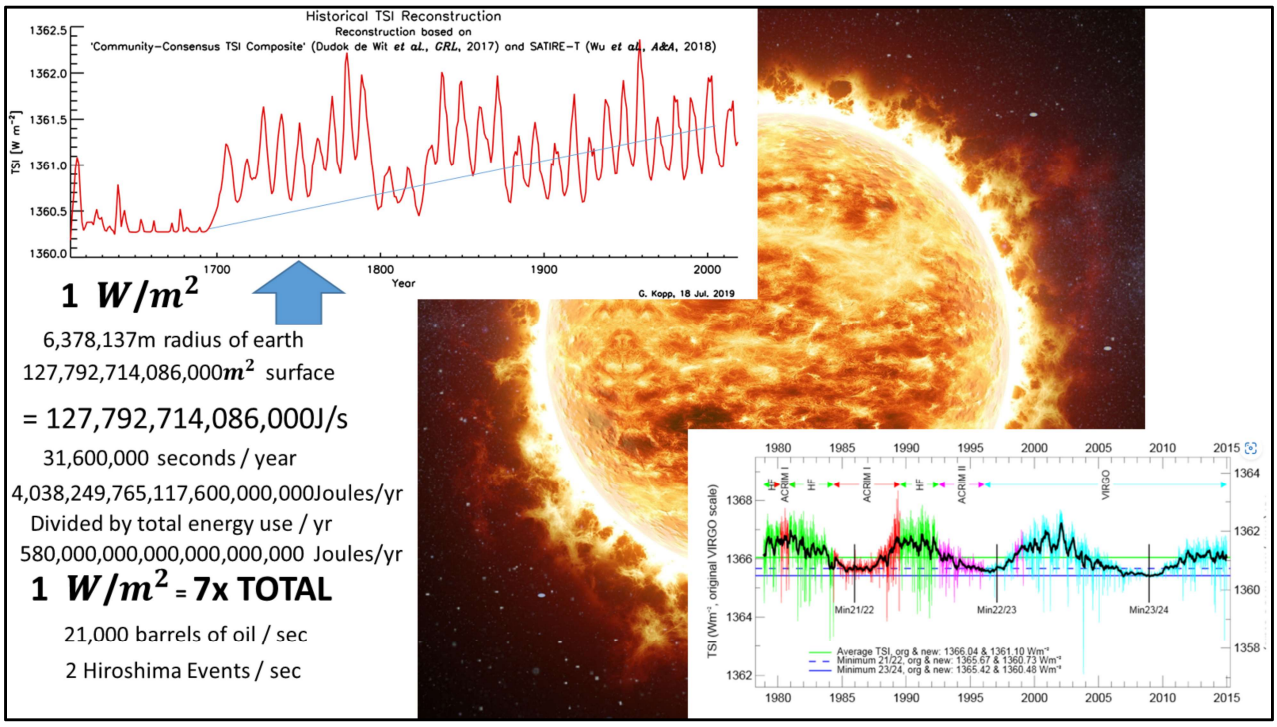


What is the temperature on Mars? | Space

In the same volume of atmosphere, Mars has 11,250% as much CO2 (45,000 vs 400 molecules)
But Mars is about 50% farther from the sun…hmmm…maybe it's the sun…



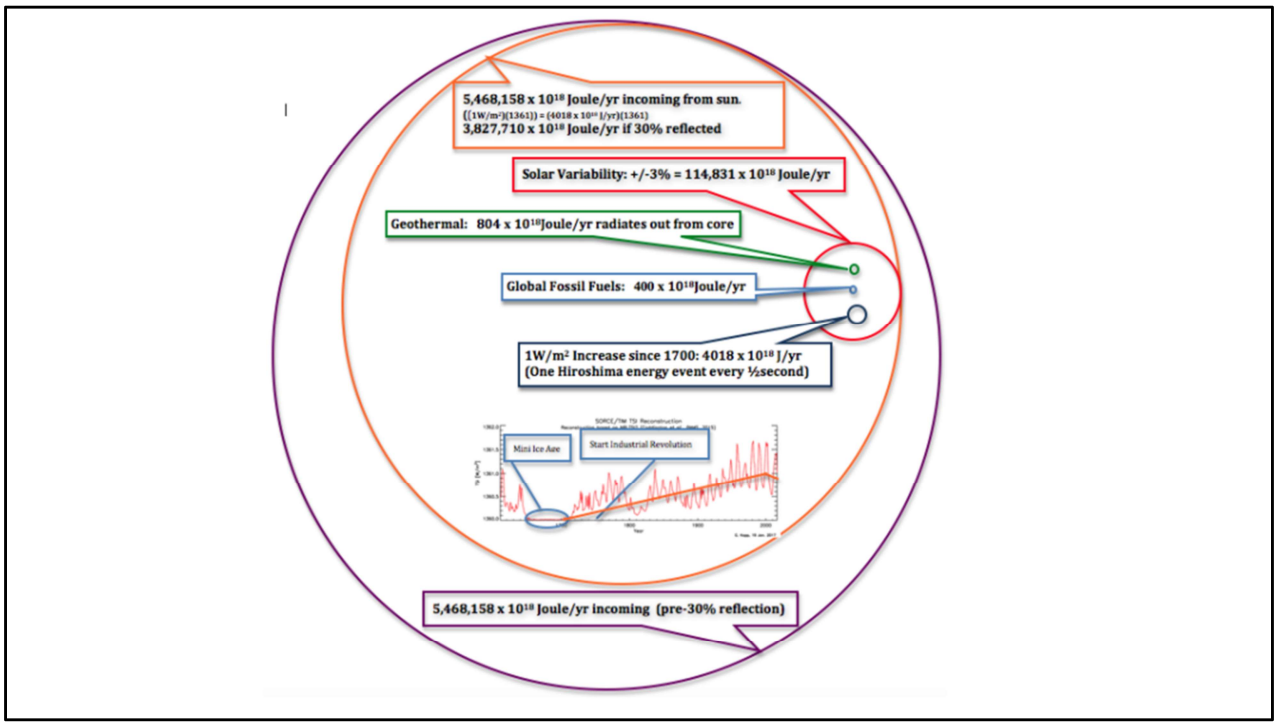
Let's do some quick number crunching. The distance from the sun to the Earth is 149.6 billion meters.
(We call this distance 1 astronomical unit.)
Using the total solar power of 3.8 x 10^{26} watts, this gives an intensity of 1,396 watts per square meter if you are located on Earth.
What about the solar intensity if you are located on Mars?
Mars has an orbit of around 1.5 AU. This gives an intensity of just 600 watt/m^2.
On Mercury, which is much closer to the sun, the intensity of sunlight would be 8,445 watts/m^2.



[SWS - The Sun and Solar Activity - The Solar Constant (bom.gov.au)](#)
[Historical_TSI_Reconstruction.png (2700×1050) (colorado.edu)](#)

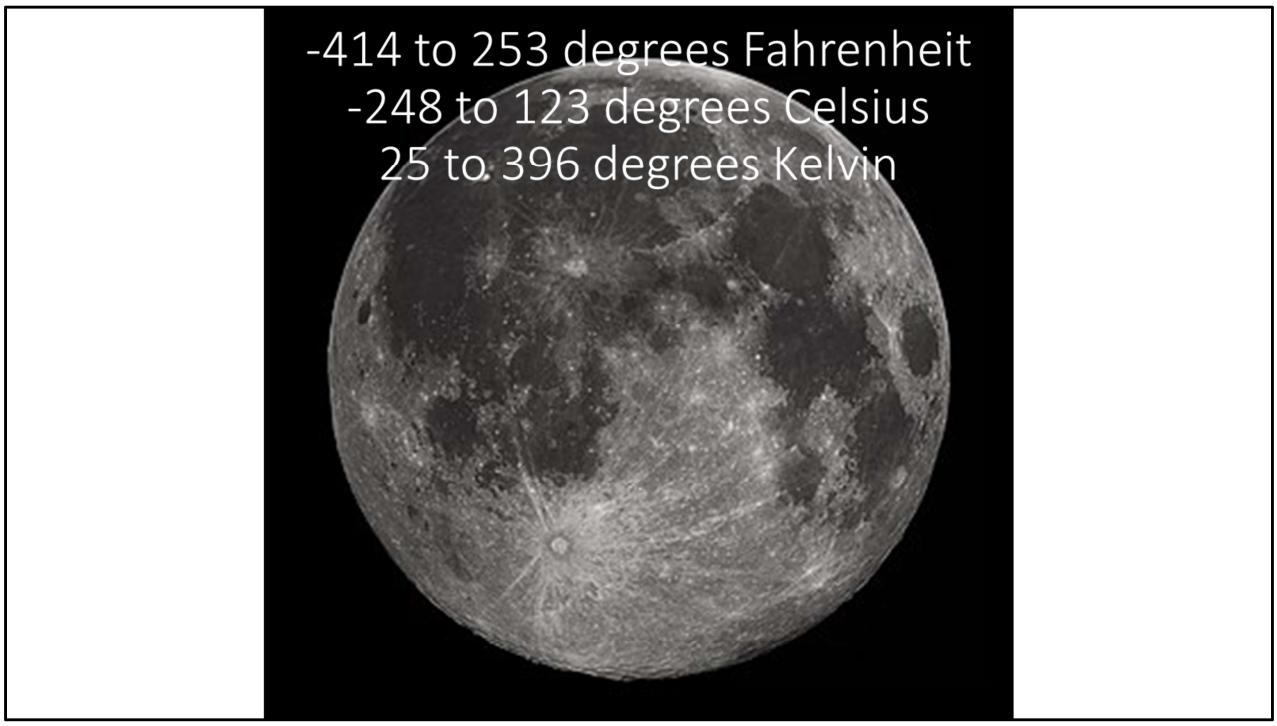
Since 1700, considered to be about the end of the little ice age and 50yrs before the beginning of the industrial revolution,
solar intensity has increased from 1360 to about 1361Watts per square meter;
just ONE extra watt per square meter over the illuminated disk of the earth.
Earth radius = 6378km = 6,378,000m = 6.378e6 m
Area = 127,800,000,000,000 square meters = 127.8e12 m2 (area of illuminated disk)
Increase in solar intensity since 1700: 1W/m2 (1 Watt per square meter)
Energy increase since 1700: 127.8e12 Watts (1 Watt = 1 J/s (Joule per second))
Total global energy use: 580e18J/yr (Joules per year) = 580,000,000,000,000,000,000 Joules/yr
There are 31,600,000 seconds in a year = 3.16e7 seconds/year
(580e18J/yr) / (3.16e7 seconds/year) = 183.5e11 J/s = 18.4e12Watts 127.8/18.4 = 6.95 ~ 7
SEVEN times more energy than humans use in a year

(127.8e12 J/s) / (60e12J/H) = 2.13H/s (over 2 Hiroshima events worth of energy per second)
(127800e9 J/s) / (6.118e9J/B) = 20 889B/s (approximately 21,000 barrels of oil per second



[When Did the Industrial Revolution Begin and End? (reference.com)]

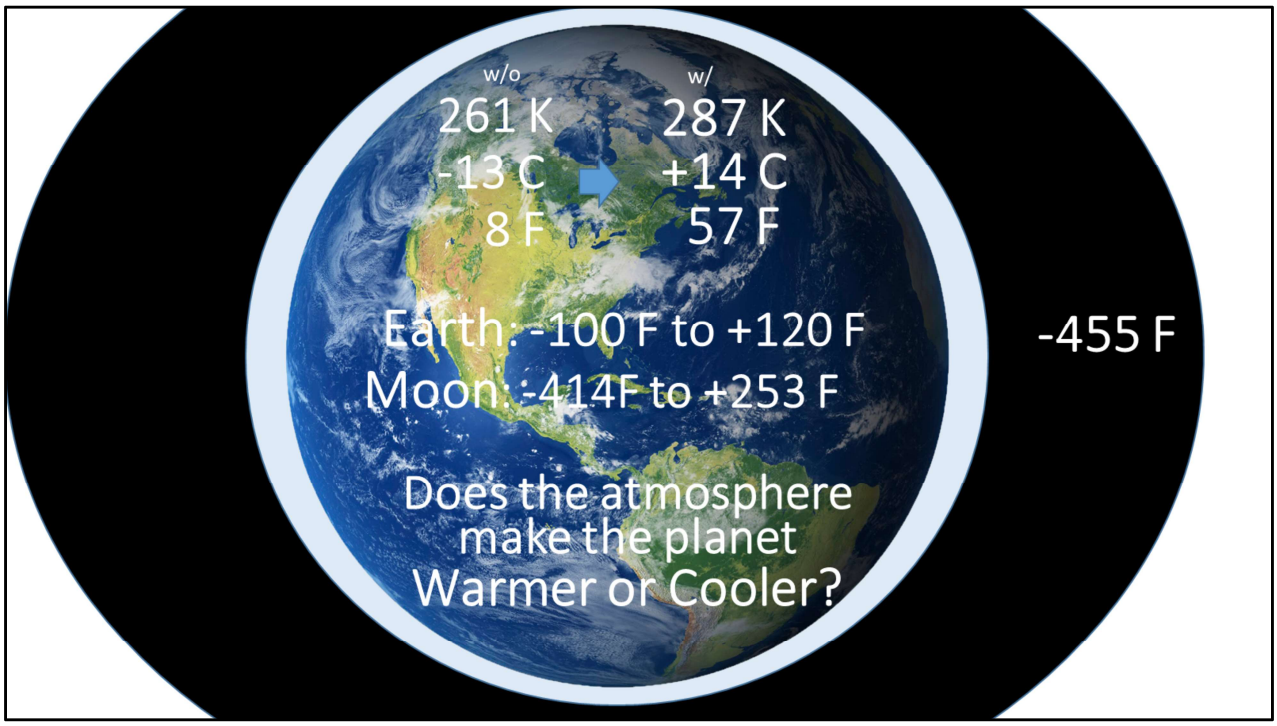
Purple circle is scaled to the insolation pre-reflection
Orange circle is scaled to the insolation post-reflection (30%)
The red circle is scaled to represent the change between the points on earth's elliptical orbit that when closest (it's (+)) or farthest (then it's (-)) from the sun
The green circle is scaled to the energy released from geothermal
The dark blue dot Is scaled to the energy from W/m2
The small light blue circle is the energy released from global hydrocarbon conversion.



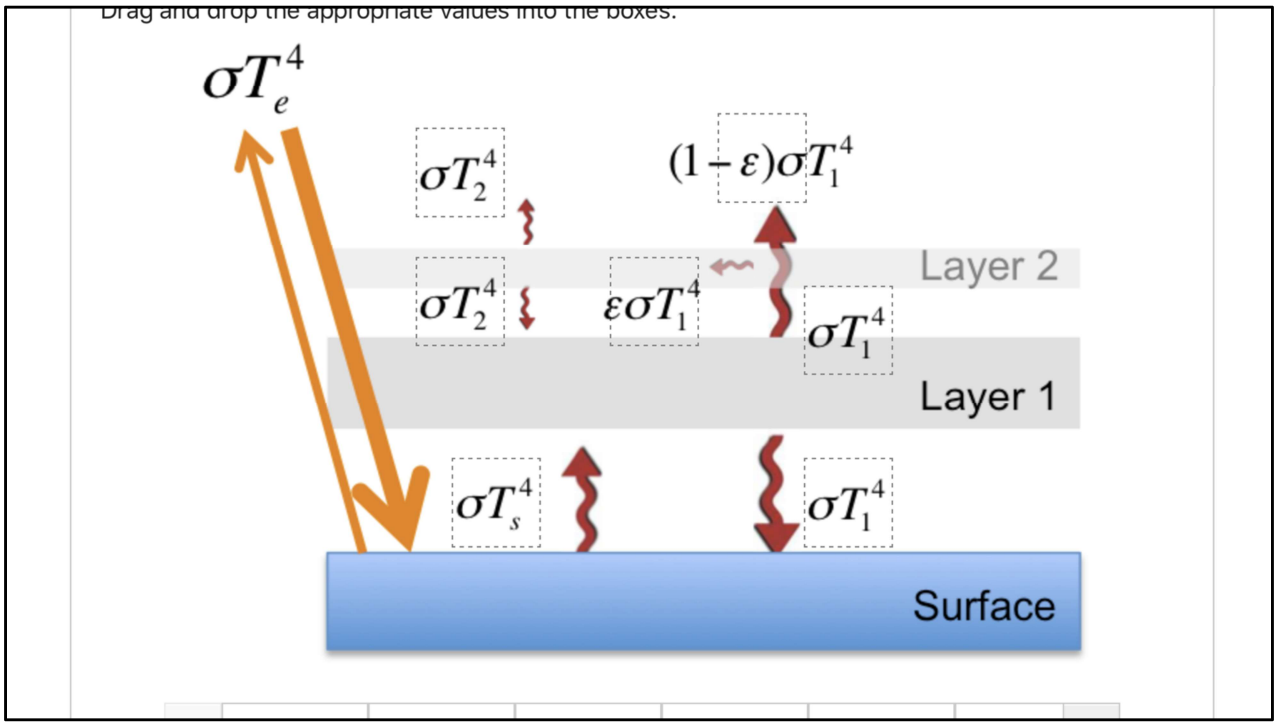
https://nssdc.gsfc.nasa.gov/.../moonfact.html

Overview | Inside & Out – Moon: NASA Science

On average, the moon is as far from the sun as the earth, although it does get closer and farther, so it's not exact



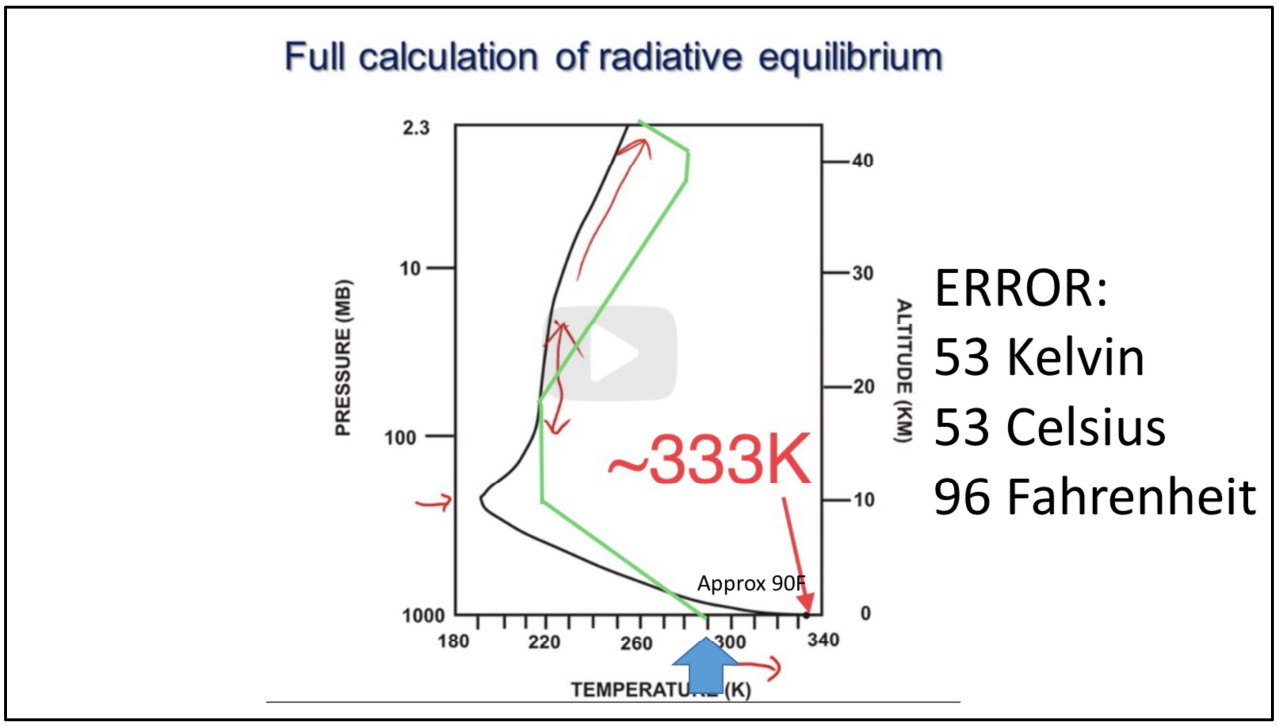
260.9 Kelvin or –13.2 Celsius.
With a quick unit conversion, that's 8.2 Fahrenheit.
this is quite a bit colder than the *actual* average temperature of the Earth (13.9 C)—a 27.1-degree C difference.
[What Would Earth's Temperature Be Like Without an Atmosphere? | WIRED]
Recall that the moon ranges



Stefan-Boltzman equation for black-body radiators
It's applied like layers of glass (green houses, doncha know?)
But S-B only applies to (theoretical) black-body radiators.

A "Planck black-body" is a theoretical unicorn that emits an energy spectrum according to the Planck laws, which are so-far the best model of the spectrum emitted from not-zero-degree Kelvin bodies.

Glass is NOT a black-body radiator, and does NOT emit energy according to the S-B laws.
Gasses are most certainly not—they emit on a very specific spectrum
Just because the environment was likened to a "green house" isn't a reason to treat atmospheric gas like glass.



It still creates a decent model…just one that is 333K-280K = 53K off (60C-7C = 53C) (140-44 = 96F)

The model creates a black line similar to the actual green atmospheric profile, but one that is 96F off.
You cannot use a model to predict variation inside its error.

The atmosphere is more like a pachinko machine where the energy doesn't pass smoothly out of the atmosphere, just bumps around, although always going in the same direction.

That the atmosphere "traps" heat is a misconception or outright lie. Try turning off your heat on a -20F day and see how long your house with solid walls and fiberglass insulation traps heat.
On that same -20F day, spend the night in your car with the engine off and see how much of your body heat your car "traps". Likely, you and your car would be the same temperature by morning. Now consider being trapped on I-25 and the battery on your Tesla dies. How long will your body heat be "trapped" in the vehicle.
While your average temperature is around 98.6F, the average temp of the planet is closer to 60F, and on the other side of a paper-thin atmosphere is the cold void of space, below -450F.

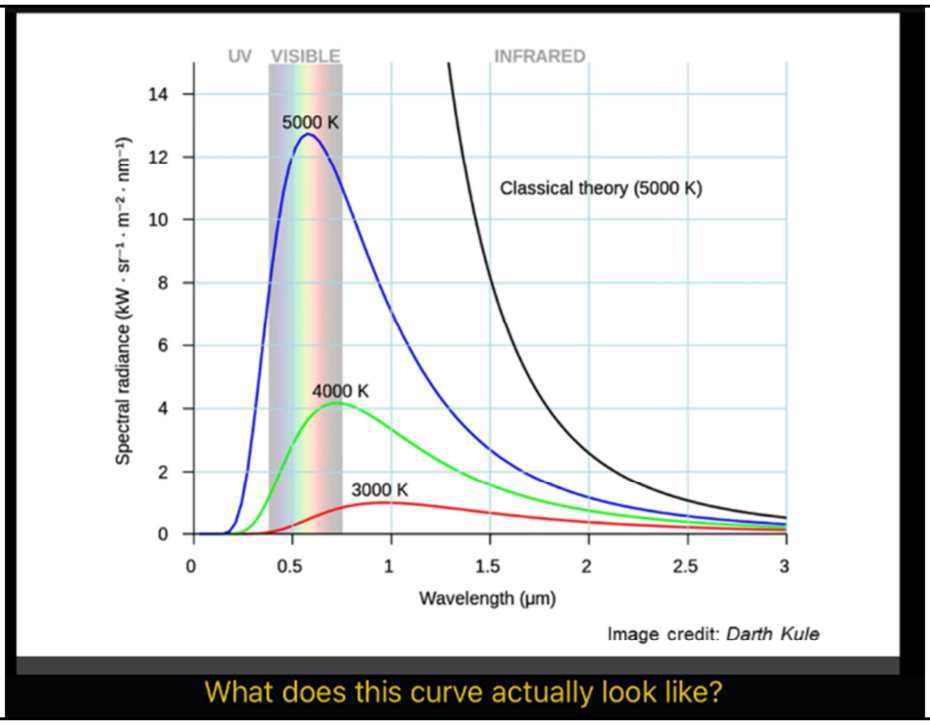
If The Sun Went Out, How Long Would Life On Earth Survive? (popsci.com)
Within a week, the average global surface temperature would drop below 0°F. In a year, it would dip to –100°.
Although some microorganisms living in the Earth's crust would survive, the majority of life would enjoy only a brief post-sun existence.

1816: the year without a summer.
https://www.bing.com/videos/search?q=if+the+sun+went+out+how+long+would+we+live&view=detail&mid=54F749B8E249ED52DCE854F749B8E249ED52DCE8&FORM=VIRE
Famine led to disease and disease led to a cholera epidemic.

The surface is 5800K, hot enough to melt diamond and graphene, But is just far enough away that earth is at the ideal temperature

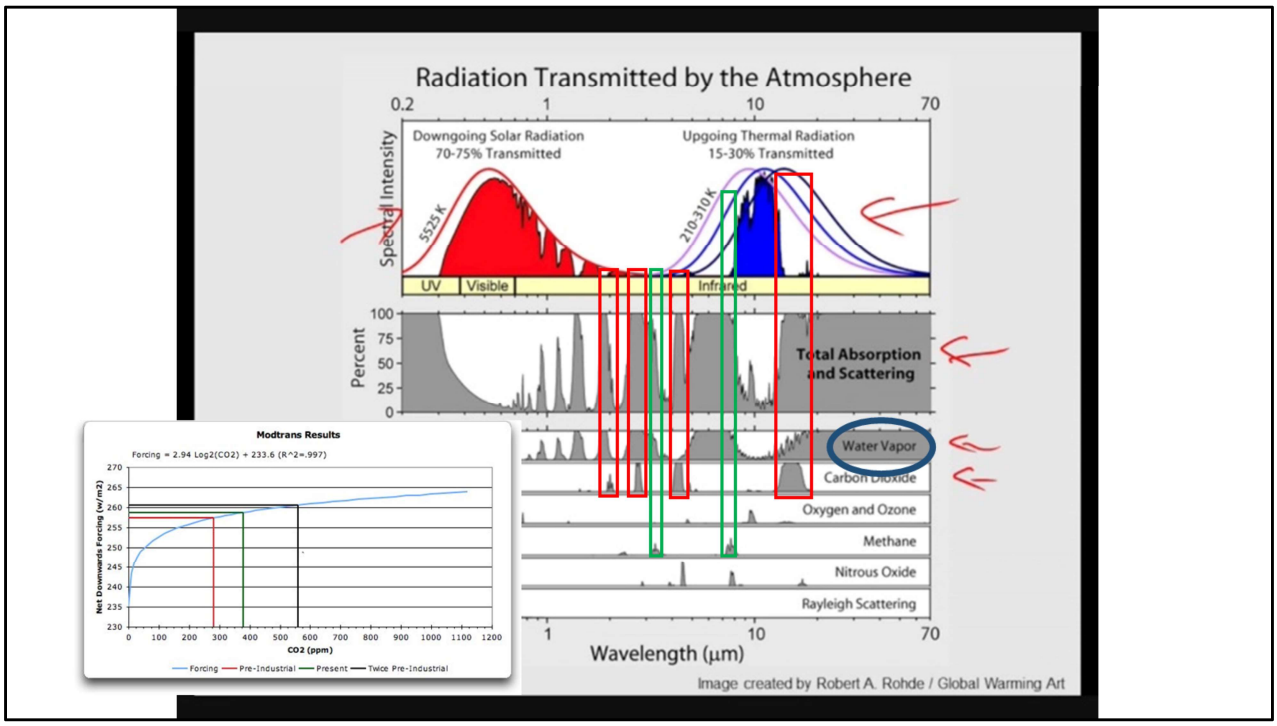
If the sun went out, we wouldn't know for 8.5 minutes, and the moon until residual sunlight stopped reflecting
In about a week, we'd be at -32F (0C), but most plant life would almost immediately die.

Of course, the planets would all tangent into oblivion at 67,000 mph.
As your house had electic heat…no heat.



A black-body radiator emits along a continuous spectrum.
A gas is nowhere near a black-body radiation since it emits on a very punctuated spectrum

This is how LED bulbs get their K designation. 5000K is daylight, 2700-3000 is soft white. Notice how quickly the peak energy drops off. A 20% decrease in K (5000 to 4000), drops the power by over half.
The spectrum radiated from the earth at 300K would need to be magnified about 100,000 times to be seen on this scale.



Astronomy - Ch. 9.1: Earth's Atmosphere (21 of 61) What is the Overlap Effect? – YouTube
Doubling 285 to 570 increases CO2 absorbtion by 0.5%
Astronomy - Ch. 9.1: Earth's Atmosphere (20 of 61) Comparing All Major Geenhouse Gases – YouTube
Water vapor at least 90%, CO2 7-9%

There is no such thing as “infrared heat”, just “infrared energy”. You are made up of about 80% water, which reacts with infrared radiation to excite your molecules which you sense as heat.
Note that in the UV side, water doesn’t interact with UV, so UV passes through clouds and does not excite your water molecules. It does, however, damage your cells (melanin blocks UV, protecting cells, but UV is required for vitamin D production). Thus, on a cloudy day, your cells get full UV damage without you feeling the heat resultant from IR and you comfortably burn on a cloudy day (unless melanin).

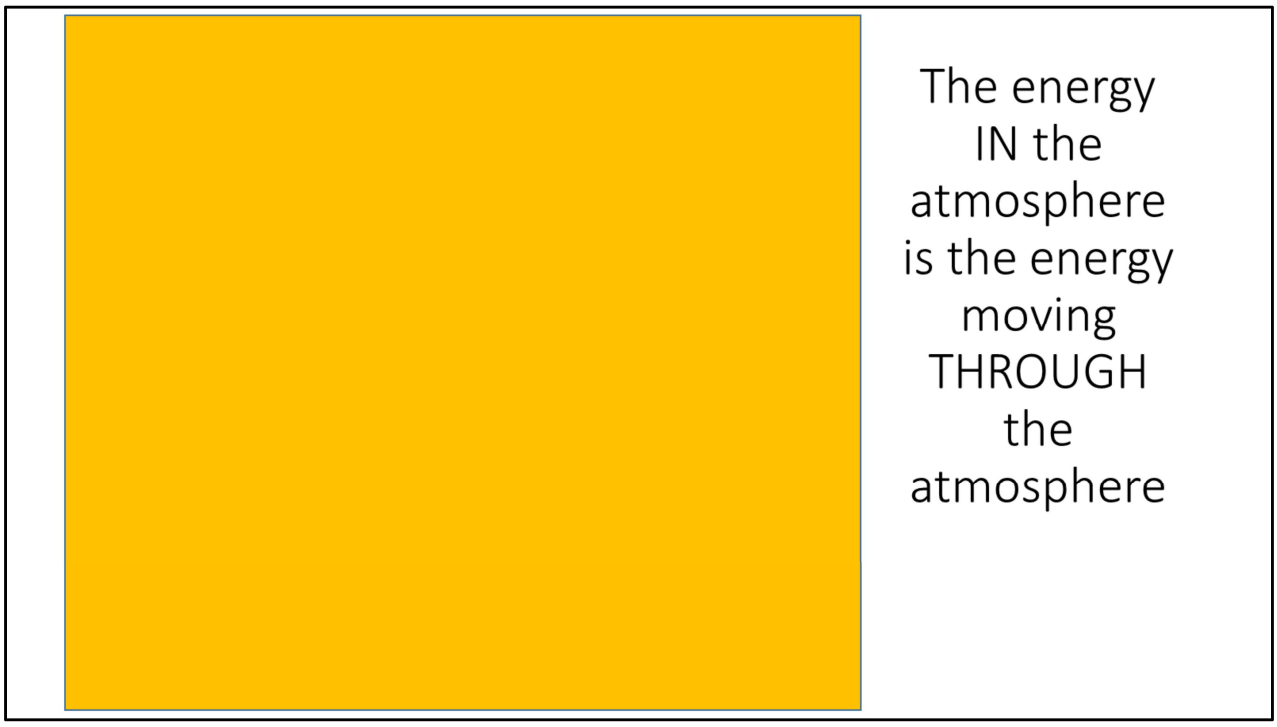
(iLectureOnline.com videos explaining spectral absorption (approx. 5min each))
https://youtu.be/XIBsjBvRTew https://youtu.be/pgoR7dCPc8w (Water vapor 90%)
https://youtu.be/lsMWUK4WGkk https://youtu.be/umS5aUka91Q

Co2 absorbs in 4 main bands, 3 of which are effectively 0 energy. And the one with energy

is saturated.
the contribution of CO2 has been shown to be a logarithmic relationship, where doubling the co2 will have a fractional increase, because if the spectral band is saturated, no increase in CO2 will make a difference.

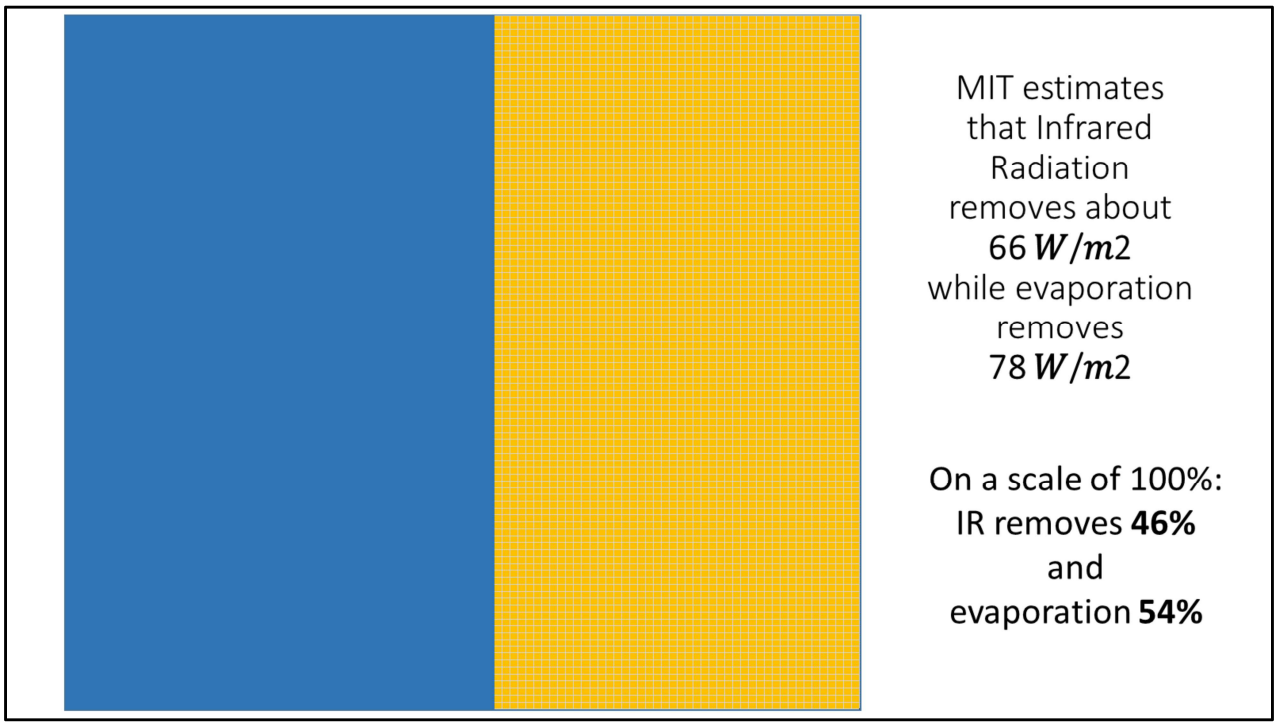
It's like having half of a bucket of water, and you fill it with sponges to absorb all of the liquid, then you add more sponges. ALL of the sponges will have water in them, but there won't be any additional water (ie, energy)

Note, the two plots of radiation incoming on the left (red) and outgoing on the right (blue) are not actually equal.
For convenience, the x-axis is on a logarithmic scale, which compacts the data.
The plots are also "normalized"—each is divided by it's magnitude, or maximum value.



The energy IN the atmosphere is the energy moving THROUGH the atmosphere
Space is -455F, energy moves from high to low, just like water, just like pressure.

We'll use this block to represent the energy leaving earth



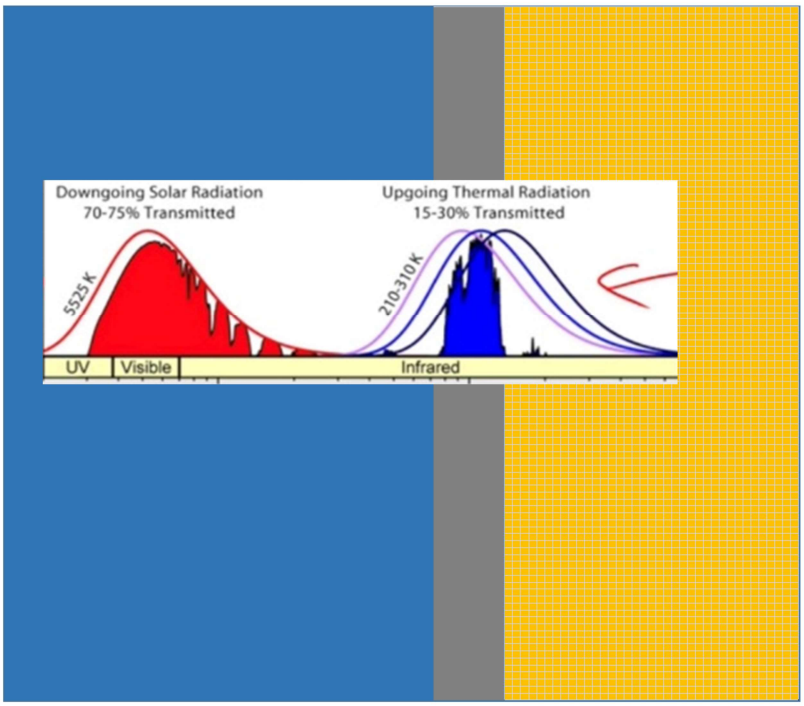
54% of the energy IN the atmosphere is that which is moving THROUGH the atmosphere due to evaporation.
Evaporation takes the energy up to where the air is dry. Water vapor then condenses, releasing the energy which leaves the atmosphere without the resistance of much water vapor.
Only trace gasses like CO2 (0.04% of the atmosphere) will give any resistance.
The rest travels freely into the -455F void.

I did a quick calc on evaporation, and a 2 min cartoon to explain it to my students.
https://rumble.com/vtdo6w-rain.html

The excuse for leaving out water vapor is that it is short-lived in the atmosphere—it is "condensable".
This is true, but that's how the energy is moved. The heat of vaporization removes about 600 calories per gram, and that energy is released where the air is dry. The time taken to remove a day's worth of global energy usage is less than 30seconds of global evaporation per day.

Carbon dioxide, while not "condensable" is consumable. Plants will use as much as they can, as fast as they can to make structure and energy storage (often what we use for food).

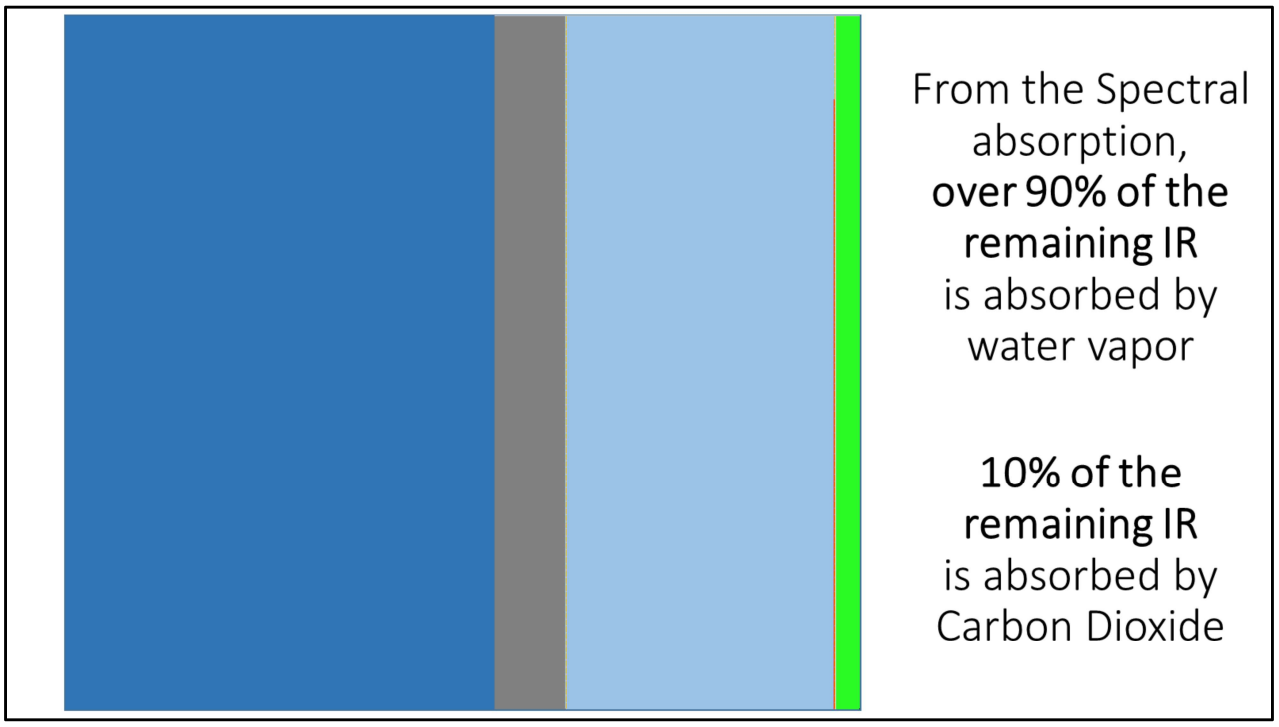
Trees respire CO2 at night, some estimates have trees respiring over 10x that of global vehicle traffic. Greenhouses don’t augment CO2 at night for this reason.



From the Spectral absorption, approximately **20% of IR** passes cleanly through the atmospheric window

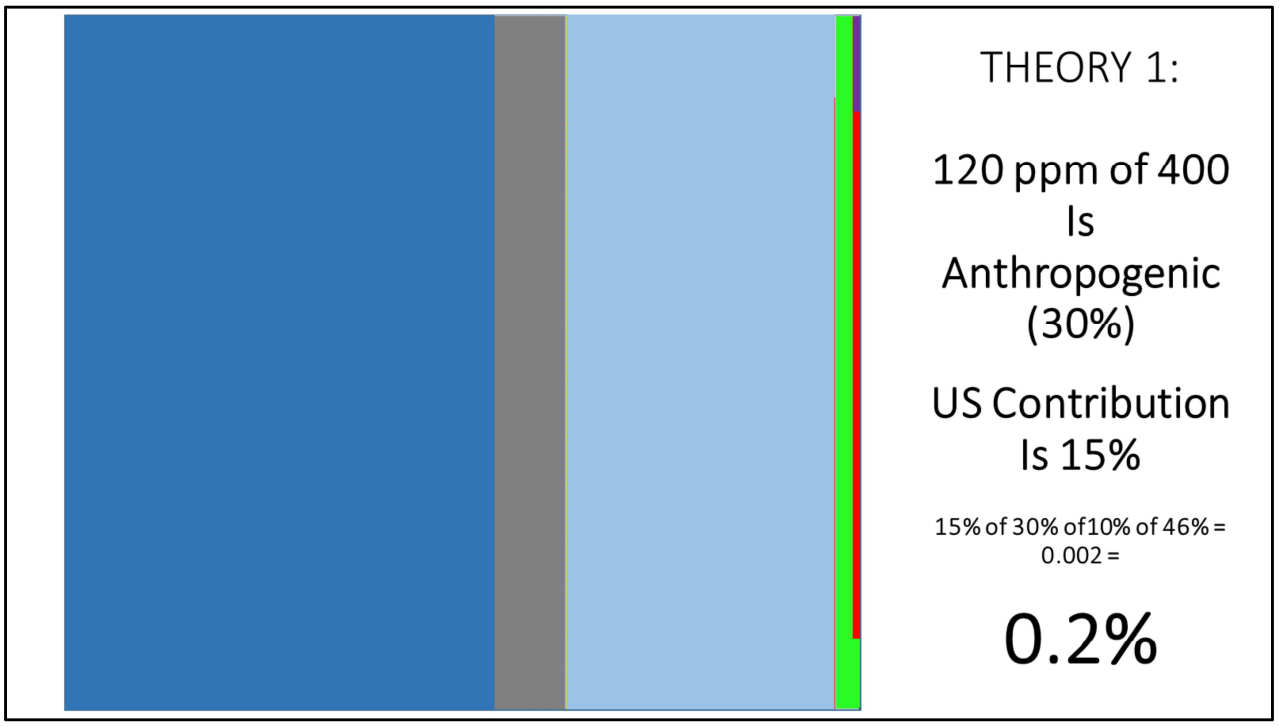
About 20% of the IR moves unhindered through the atmospheric window.
Over 90% of the remaining is absorbed by water vapor
(water vapor also absorbs/blocks some of the incoming solar radiation (insolation)
(the end calculations do not account for this. Thus, the actual contribution by CO2 is lower than in the final calcs)
The arrow markings are from the MIT instructor, Dr. Kerry Emanual.

iLectureOnline.com has great astrophysics clips on how spectral absorption works.
https://youtu.be/XIBsjBvRTew
Water vapor 90% https://youtu.be/pgoR7dCPc8w
https://youtu.be/lsMWUK4WGkk
https://youtu.be/umS5aUka91Q



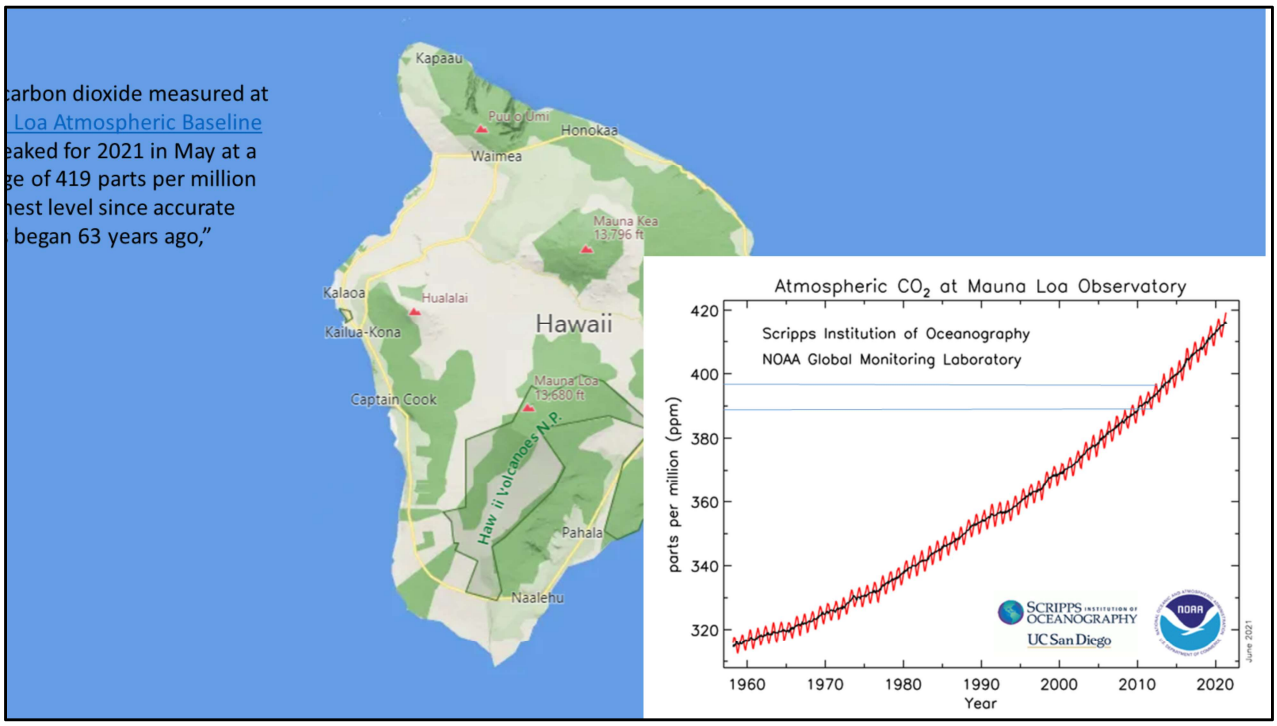
Over 90% of the remaining is absorbed by water vapor (90% shown here)
Less than 10% of the IR is absorbed by CO2 (10% shown here)
This would be the maximum contribution by CO2 to atmospheric energy.

When considering GHG, the models don't consider water vapor because it doesn't stay aloft as long as co2.
But, at any given time, there is about 100 times (10000%) (4% vs 0.04%) more water vapor than CO2, which absorbs much more IR, and the water cycle itself is what moves soooo much more energy.
You know this because you live in Colorado and appreciate that lack of humidity. Humidity is why "when the temperature is 32 °C (90 °F) with 70% relative humidity, the heat index is 41 °C (106 °F)."
It is why on a 100F day in Colorado, you can step into the shade and be comfortable, but in Florida you cannot hide.



A prevailing theory is that humans have been chugging out 4ppm/yr for 150 years = 600ppm
(since the industrial revolution)
Of that 600ppm it is postulated that the oceans have absorbed all but 120ppm(30%) of it, giving us 400ppm now.
This is Premised on 280ppm being the baseline or ideal CO2 level forever, which is far from true.

Again, this percentage is high because it does not account for the atmospheric energy of the incoming radiation absorbed by water vapor.

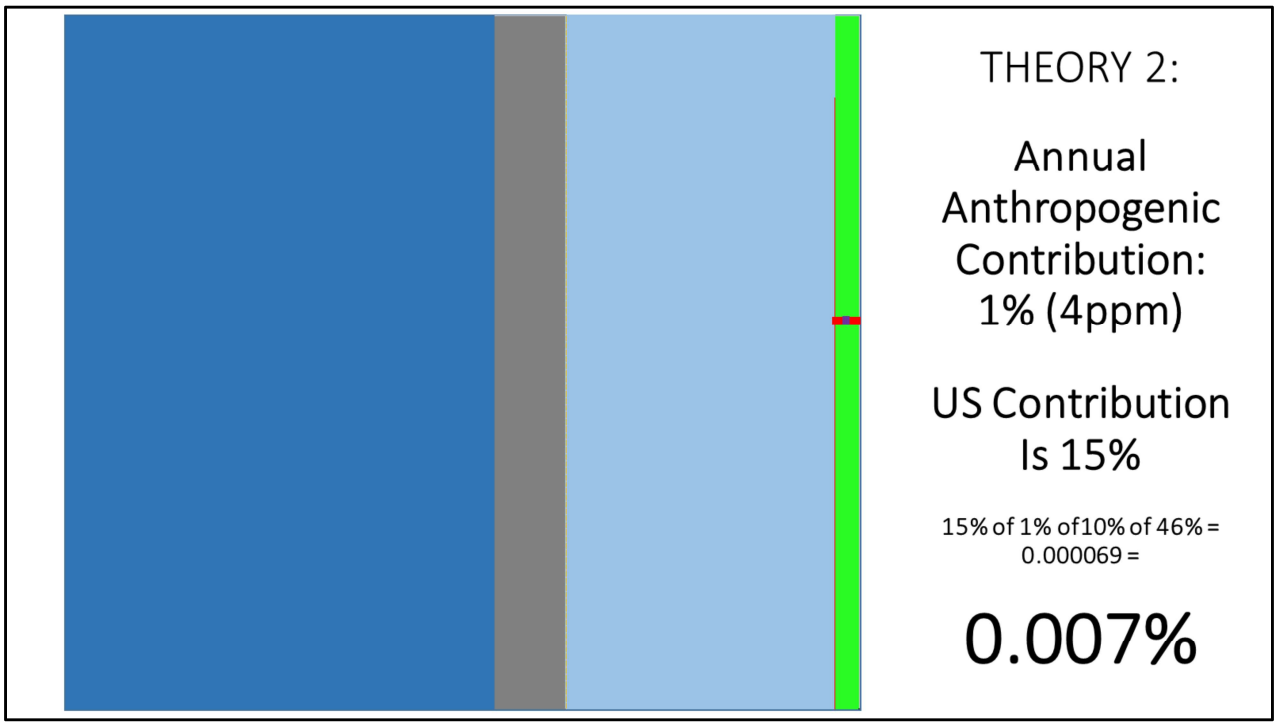


Everything prior to 1958 is an indirect measurement, via proxy data.
Note from the graph that 1960, 200 years after the industrial revolution began, CO2 barely moved from 280.
When water warms, co2 outgasses, so the oceans should be absorbing less CO2, not more.
The oceans would ultimately absorb all CO2 and precipitate it out, or it would be incorporated into shells and coral, but tectonic activity keeps "repurposing" CO2 and blasting it out of volcano's. Ocean vents chugging out 100% CO2 have been discovered in multiple locations. There are estimated to be 50-80 atmospheres worth of CO2 trapped in limestone and other formations.

"Atmospheric carbon dioxide measured at NOAA's Mauna Loa Atmospheric Baseline Observatory peaked for 2021 in May at a monthly average of 419 parts per million (ppm), the highest level since accurate measurements began 63 years ago,"

Carbon dioxide peaks near 420 parts per million at Mauna Loa observatory - Welcome to NOAA Research

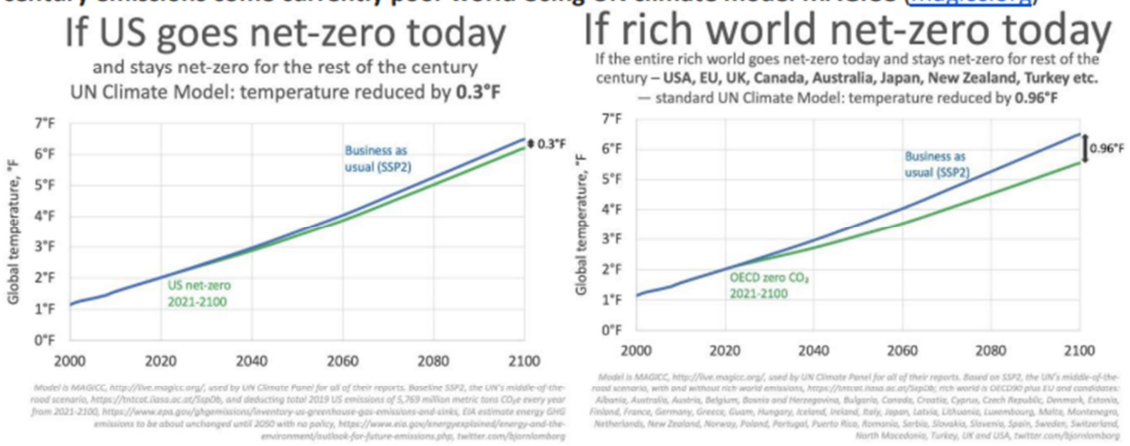
aer Tans, a senior scientist with NOAA's Global Monitoring Laboratory, noted that CO_2 is by far the most abundant human-caused greenhouse gas, and persists in the atmosphere and oceans for thousands of years after it is emitted.
"We are adding roughly 40 billion metric tons of CO_2 pollution to the atmosphere per year," said Tans. "That is a mountain of carbon that we dig up out of the Earth, burn, and release into the atmosphere as CO_2 - year after year. If we want to avoid catastrophic climate change, the highest priority must be to reduce CO2 pollution to zero at the earliest possible date."



If we consider IR and evaporation the total of energy moved, IR moves 43%; evaporation 57% (75/175 = 43/100; 43/57 = .75) About 20% of the IR exits the atmosphere unhindered. Of the 80% that is delayed, over 90% of that is by water vapor & less than 10% by CO2. In our CO2 starved atmosphere, humans contribute about 1% by hydrocarbon conversion (4ppm of 400ppm = 1%) (1500-2000ppm considered "ideal" for plant growth) The US contribution to global hydrocarbon conversion is about 15% of that. 15% of 1% of 10% of 80% of 43% is 0.005% This is the US CO2 effect on atmospheric energy.

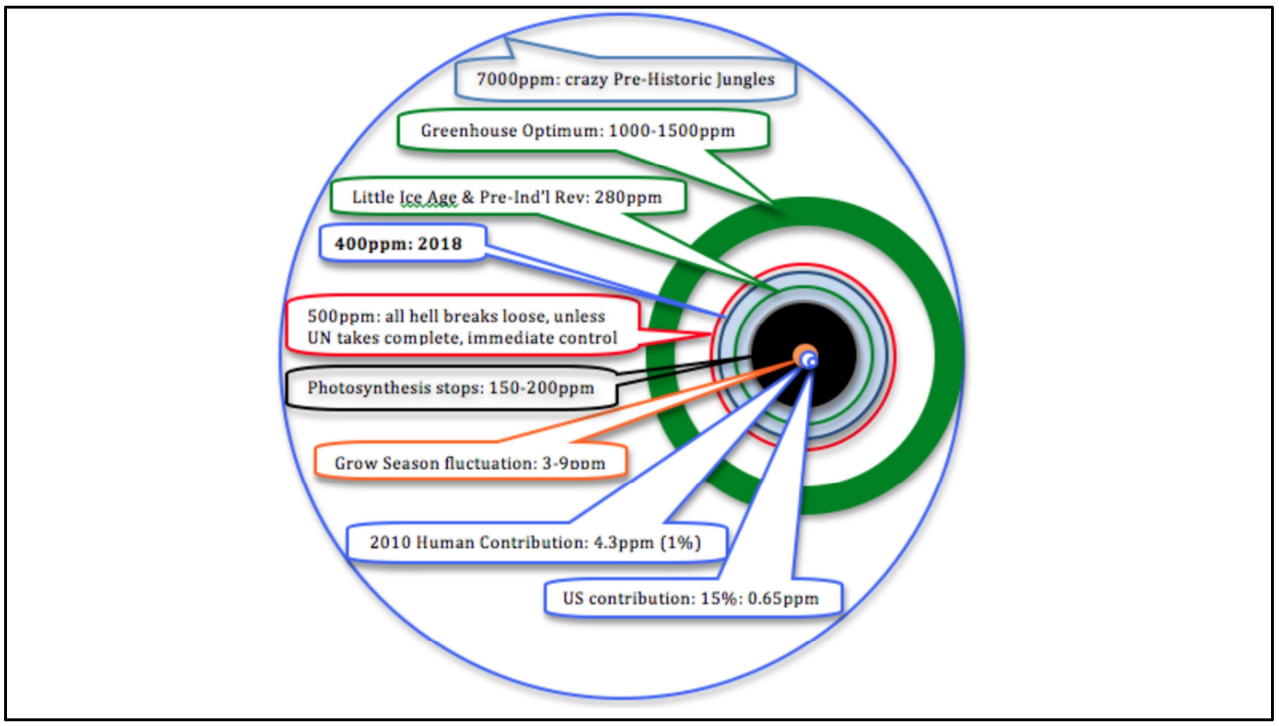
So, the theory is that the one purple dot, is driving the temperature increase that increases evaporation that causes global warming, or cooling or both. So, even with the partial-truth about CO2, they admit that it is ultimately about water vapor being responsible for the energy in the atmosphere.

Bjorn Lomborg on Twitter: "**Even if entire US went net-zero today and stayed net-zero for the rest of the century impact rather small, reducing temperature rise in 2100 by 0.3°F (0.16°C) Because vast part of 21st century emissions come currently poor world Using UN climate model MAGICC** (magicc.org)"

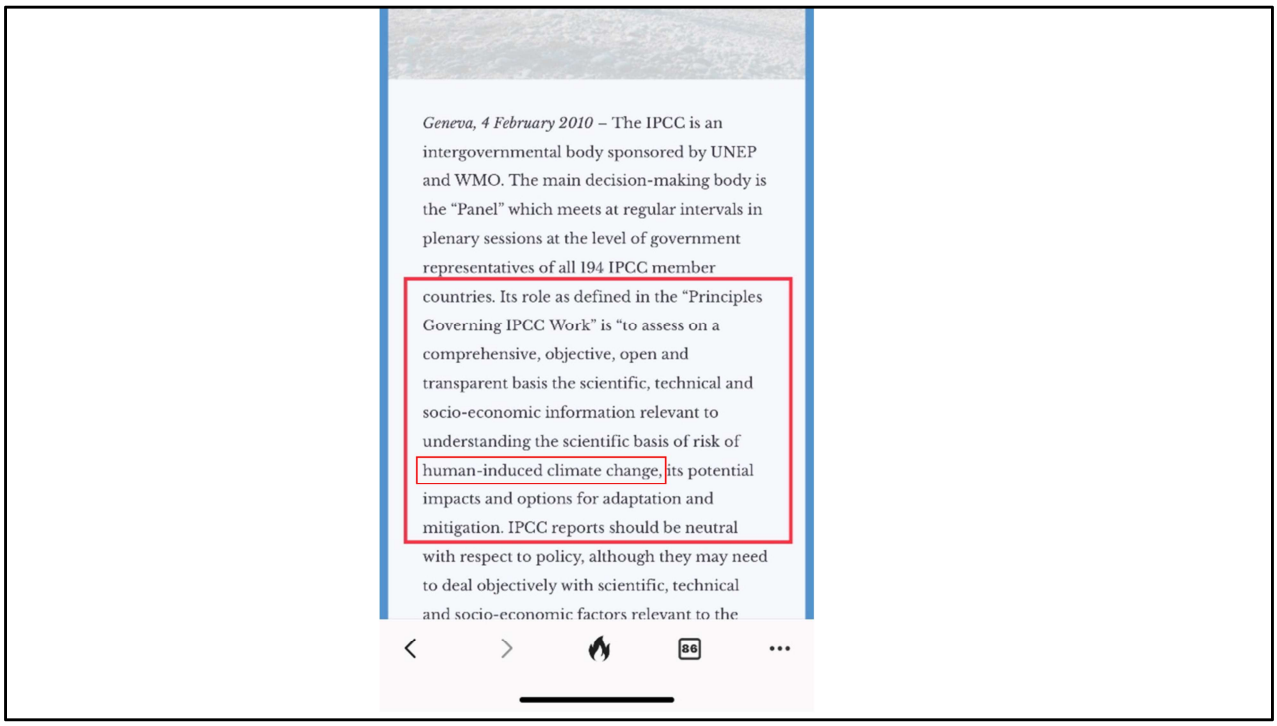


IPCC models recognize this.

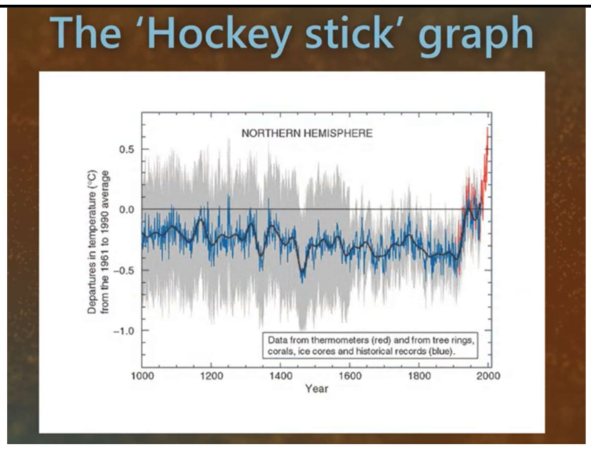
Why doesn't this match the hype? Because scientists couch anything they say in "medium" to "low" probabilities, which are amplified by the media and politicians as certainties.

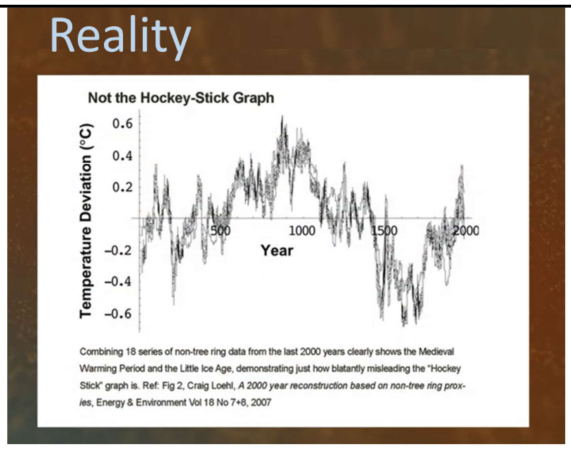


Scaled to different CO2 levels
Probably one reason plants don't do as well in your home is because they were likely grown in 1000-1500 ppm (actual greenhouse.
Arrhenius 1906, final.pdf (friendsofscience.org)
https://friendsofscience.org/assets/documents/Arrhenius%201906,%20final.pdf



The IPCC is only tasked (paid for) with finding human induced climate change

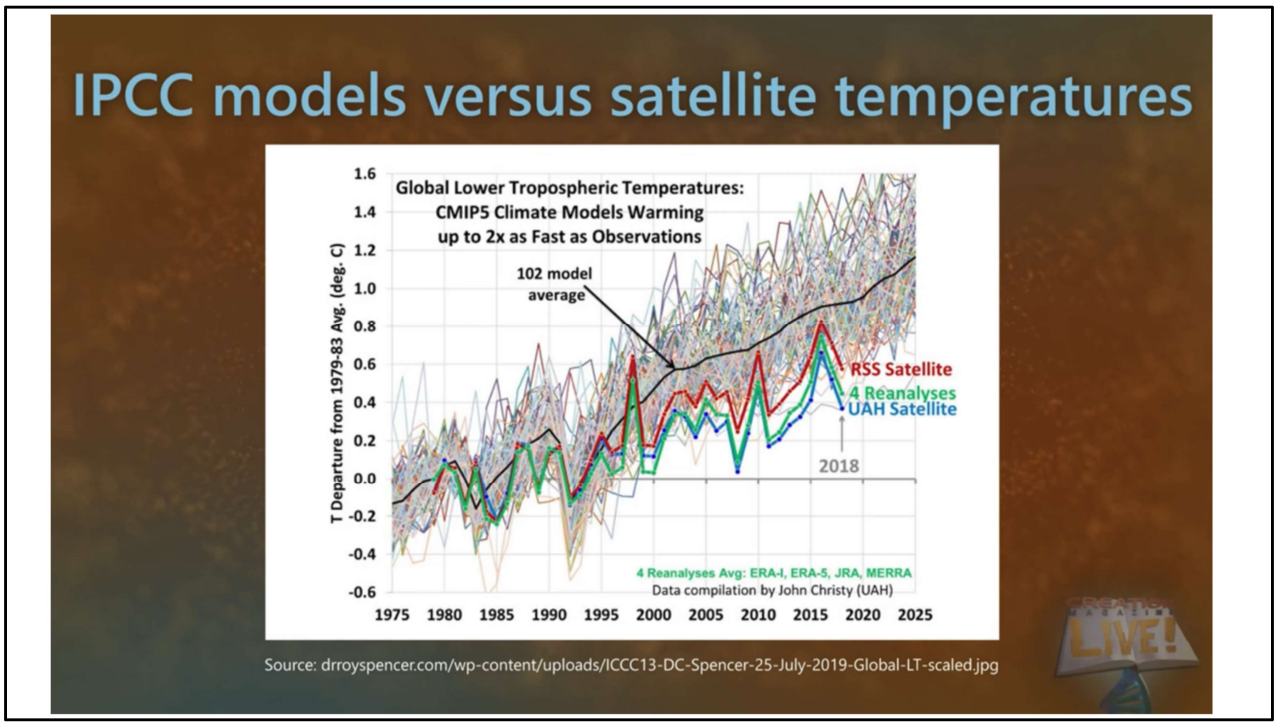




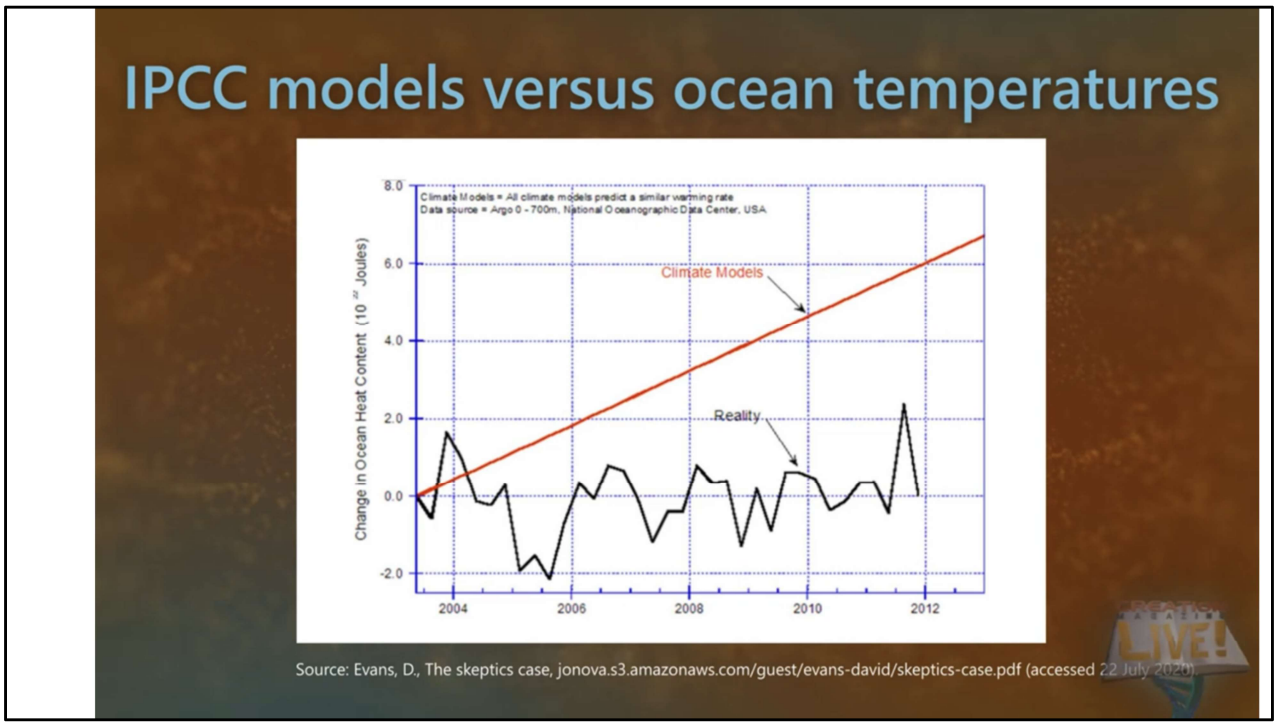
"When I was a schoolboy, my textbooks on earth science showed a prominent "medieval warm period" at the time the Vikings settled Greenland, followed by a vicious "little ice age" that drove them out. So I was very surprised when I first saw the celebrated "hockey stick curve," in the Third Assessment Report of the IPCC. I could hardly believe my eyes. Both the little ice age and the Medieval Warm Period were gone, and the newly revised temperature of the world since the year 1000 had suddenly become absolutely flat until the last hundred years when it shot up like the blade on a hockey stick. This was far from an obscure detail, and the hockey stick was trumpeted around the world as evidence that the end was near. We now know that the hockey stick has nothing to do with reality but was the result of incorrect handling of proxy temperature records and incorrect statistical analysis. There really was a little ice age and there really was a medieval warm period that was as warm or warmer than today." - ***William Happer***, *Cyrus Fogg Brackett Professor of Physics Princeton University*

An "inconvenient truth" is that the water levels predicted by Al Gore for 2010 haven't materialized.

In fact, SFO and LGA airports have collectively spent over $8,000,000,000 on improving airports that should have been underwater over a decade ago.

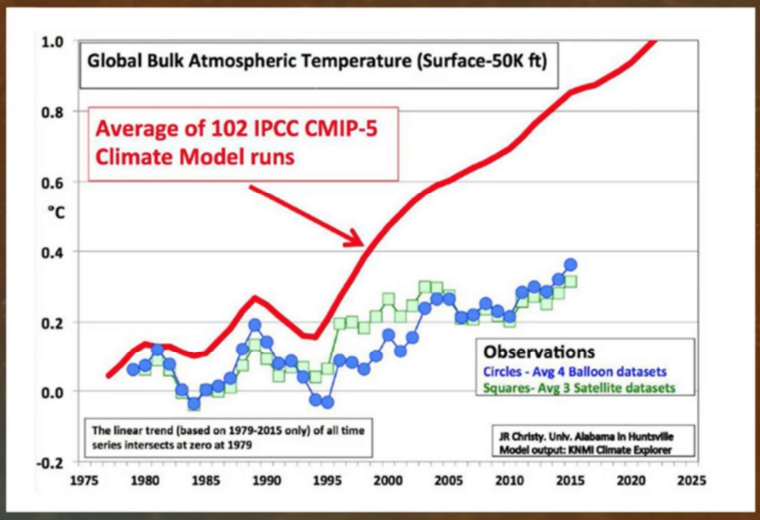


Models are useful for predicting reality. The models do not predict reality.
Dr. Kerry Emanual from MIT, estimated that IF you knew every data point in the atmosphere for the basis of running the weather models, the furthest out that could be predicted was about 2 weeks.
Climate scientists will tell you that it's easier to predict climate in 100 years than weather in 3 days, however, even though they've never proven their assertion.
What makes science "science" is that it is observable, measurable, repeatable, and falsifiable. Climate "science" rejects all of those criteria, and therefore remains a hypothesis at best,

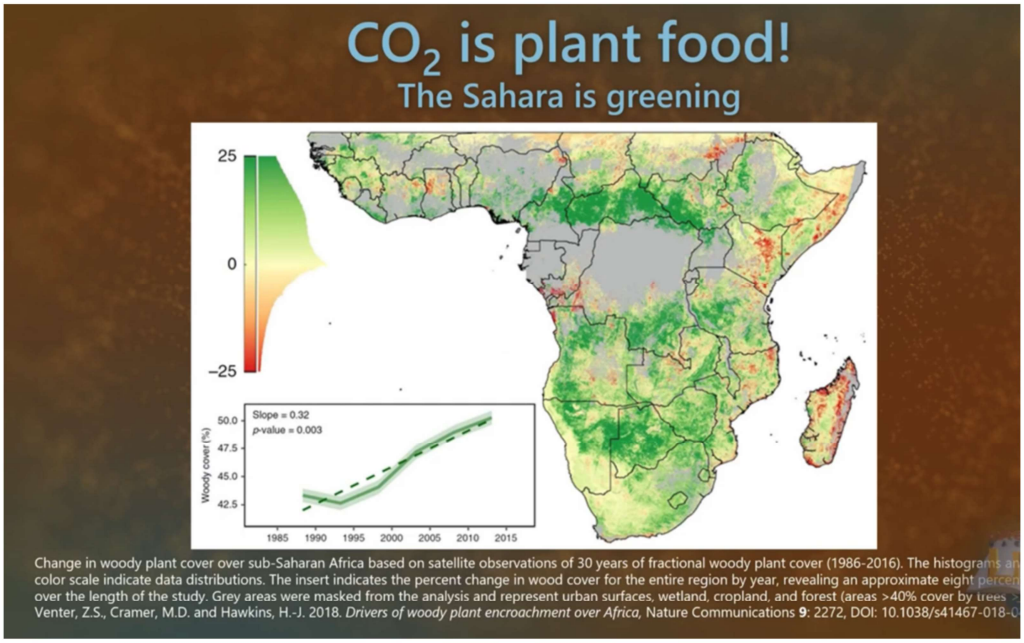


Prediction vs reality.
The prediction that the oceans will boil in 100 years is a prediction of ignorance.
As oceans warm, evaporation increases, which cools the oceans and creates clouds which reflect the sun which cools the earth.

IPCC models versus tropical temperatures



Source: Lewis, M., Satellites and global warming: Dr Christy sets the record straight, 5 Feb. 2016; globalwarming.org (from Dr John Christy's testimony to the USA House Science Committee hearing on the Paris climate treaty).



CO2 makes plants grow. Put a plant in a jar with dry ice.
Green houses pay good money to pump their levels up to 1500-2000ppm.
Submarines keep their levels at or below 8000ppm. There are no significant health impacts until 15000 ppm.

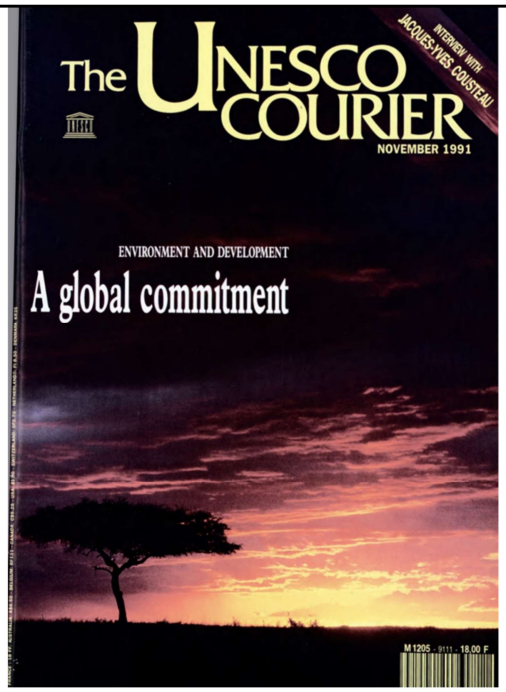
The Carrington Event: History's greatest solar storm | Space
A Super Solar Flare | Science Mission Directorate (nasa.gov)

Proverbially, putting your eggs in one basket is stupid. Total electrification is risky and just stupid

1. As of 2021, every year some ~809 gigatonnes of carbon dioxide are emitted; in other words, 809 billion metric tons of CO2 are produced every year (according to the "global Carbon Budget 2021" produced by *Earth Systems Science Data* [the standard global authority of CO2 levels]).
2. Do you know how much of that total came from fossil fuels? Thirty-four (34) gigatonnes – that represents just 4.3% of the total.
3. Where did the other 95% come from? Carbon dioxide is a naturally occurring molecule that is both consumed and produced in the course of microbial photosynthesis and respiration.
4. Since 1880 global temperature has increased a little over 1° C; that's 1° in 140 years.
5. By comparison, research done by Scott Lehman (of UC Boulder) revealed a series of abrupt climate changes from ~15,000 to 8,000 aBP that resulted in sea surface warming of more than 5° C (9° F) in fewer than 40 years – that's roughly 15 times the rate of modern warming.
6. Nevertheless, over the past 170 years atmospheric concentrations of CO2 have steadily increased.
7. Yet from 1850 until now, for about 70 of these years (1910-1945; 1975-2000; 2010-2020), temperatures were trending up.
8. But for another 100 or so years, temperatures were stable or decreasing (~1850-1910; 1945-1975; 2000-2010).
9. If the climatically toxic carbon dioxide were as potent in creating global warming as some believe, shouldn't we expect far, far fewer years in which temperatures were stable or going down? In fact, carbon dioxide is not the prime source of global warming, and should not be regarded as a toxic pollutant.

Arrhenius 1906, final.pdf (friendsofscience.org)
https://friendsofscience.org/assets/documents/Arrhenius%201906,%20final.pdf

- Unknown costs of going to net-Zero. Trillions of dollars.
- Our “climate goals” are “CO2 goals” with no impact on climate
- (eg) $100 (eventually) to sequester 1 ton of CO2
  - 1Gigaton = $100,000,000,000 straight into a hole the ground
  - 1 Gigaton out of over 3000 Gigatons in the atmosphere.



■ *Some snakes, mosquitoes and other animal species pose threats or dangers for humankind. Can they be eliminated like the viruses that cause certain diseases?*

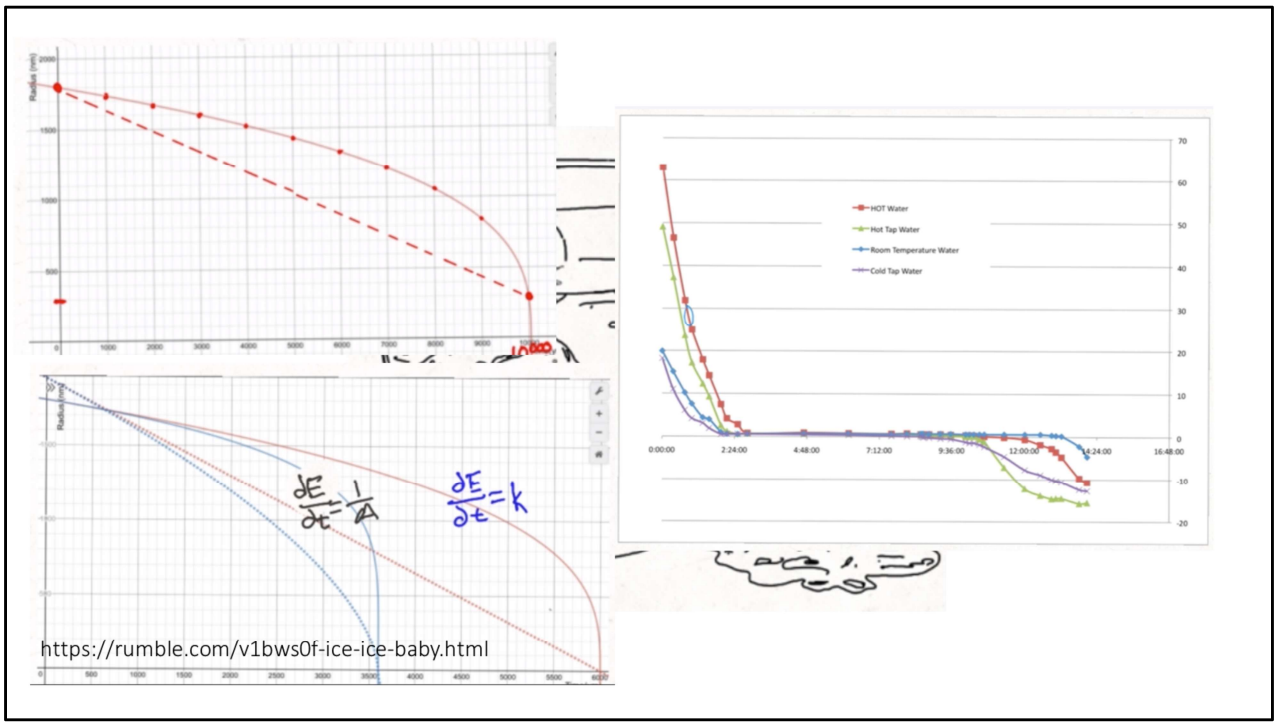
— Getting rid of viruses is an admirable idea, but it raises enormous problems. In the first 1,400 years of the Christian era, population numbers were virtually stationary. Through epidemics, nature compensated for excess births by excess deaths.

I talked about this problem with the director of the Egyptian Academy of Sciences. He told me that scientists were appalled to think that by the year 2080 the population of Egypt might reach 250 million.

What should we do to eliminate suffering and disease? It's a wonderful idea but perhaps not altogether a beneficial one in the long run. If we try to implement it we may jeopardize the future of our species.

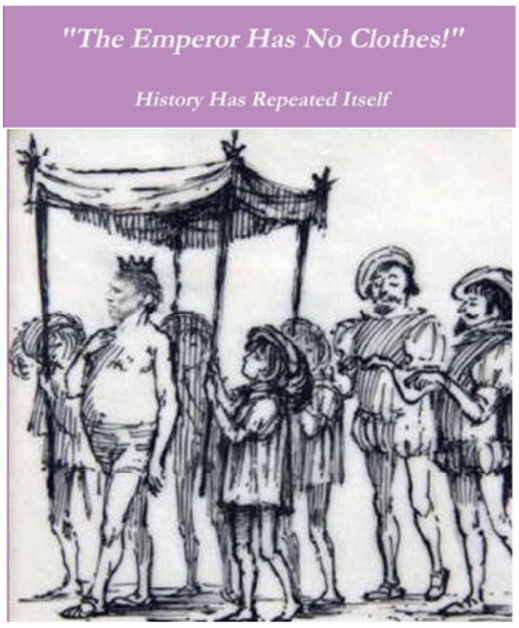
It's terrible to have to say this. World population must be stabilized and to do that we must eliminate 350,000 people per day. This is so horrible to contemplate that we shouldn't even say it. But the general situation in which we are involved is lamentable.

Comments made by Jacques Cousteau back in 1992…there are those who still think this



https://rumble.com/v1bws0f-ice-ice-baby.html

Why would ice caps seem to be melting at an increasing rate? Because that's what you should expect mathematically.



The surest way to learn the value of ancient wisdom is to forget it.

The climate hypothesis has been governing the energy debate. It has no clothes, yet we praise it every day.

Why?

- Why present this to a democrat General Assembly when it will just be voted down, despite the science?
  - Because a half truth is a whole lie
  - Because of CO2-driven energy policy, people are losing jobs, homes & savings
  - Because people will die from CO2 energy policy
    - Politicians need to know it is their fault.

https://www.youtube.com/watch?v=xf7WOy9QvwA start at minute 2:50

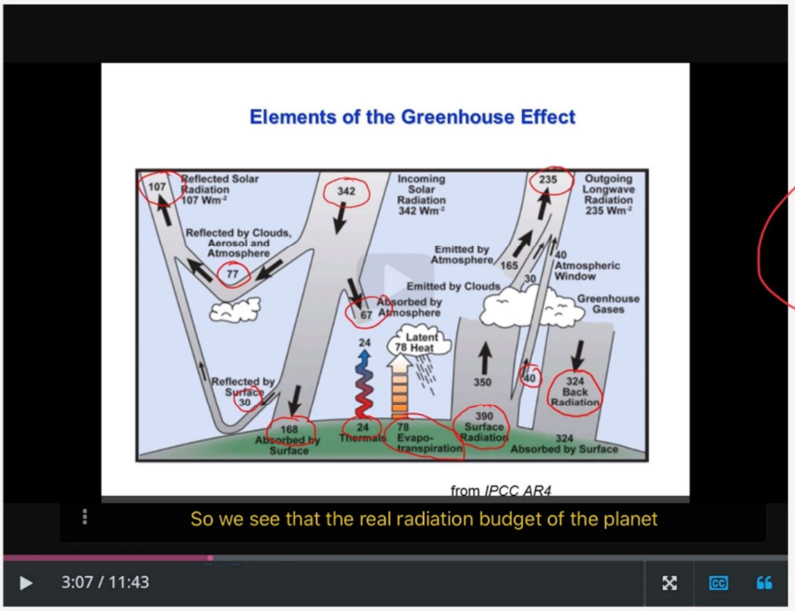
Heat waves: almost everywhere on the planet, many more die from cold than from heat.
2022: eastern asia, about 80,000 die from heat waves., but every year 1.15million (14times as many) die from cold
"there are more heat waves, we're all gonna die!" it's fairly easy to tackle more heat—air conditioning
On the other hand, cold deaths are more difficult to deal with and requires heating to be on the whole winter (vs 3-4 days). Energy costs mean people cannot afford the energy an people die.

Hyperbole:
Michael Mann: we've got to bring carbon levels down below 50% in the next 10 years.
John Kerry: you all saw the recent IPCC report, and one scientists words, "our house is already on fire"…this is the path of greatest destruction.

Bjorn: climate is a real problem, being addressed with really poor policies.
The damages from global warming…4% of GDP by the end of the century
9'30" : UN estimate will be about 450% as rich in 2100, but it will feel like only 434% as rich as we would have otherwise felt. We will get rich more slowly.

John Kerry: https://www.youtube.com/watch?v=MhsUhdy2VBY

Earth's radiative balance



atmosphere, which accounts for about 24 watts per meter

squared, and by evaporation of water from the ocean and from

wet land surfaces, leaves, plants, and so forth.

That amounts to somewhat more, 78 watts per meter squared.

It turns out that evaporative cooling of the surface is the

major means by which the surface of the Earth cools,

particularly so in the tropics.

So at the end of the day, about 235 watts per meter

squared leaves the atmosphere, which balances the net

incoming sunlight once you've subtracted off the amount

that's reflected to space.

So we see that the real radiation budget of the planet

is measured by radiometers on satellites, and by