

Can Earth's Surface Absorb Colder CO₂ Back-radiation?

By Pierre R Latour, March 21, 2012

The story began with an essay Yes Virginia by Dr Roy Spencer July 23, 2010 claiming that it could.

<http://www.drroyspencer.com/2010/07/yes-virginia-cooler-objects-can-make-warmer-objects-even-warmer-still/>

When Latour discovered it, he posted a rebuttal No Virginia and wrote Roy this email.

<http://www.slayingtheskydragon.com/en/blog/185-no-virginia-cooler-objects-cannot-make-warmer-objects-even-warmer-still>

From: Pierre Latour
To: Roy W Spencer
Subject: No Virginia, Cooler Objects Cannot Make Warmer Objects Even Warmer Still
Date: Mon, 7 Nov 2011 17:38:14 -0600

Dear Dr Roy Spencer,

I have shared your scientific skepticism of Global Warming and Greenhouse Gas theory promoted by the UN IPCC for a number of years.

While Earth's radiating temperature goes up and down from time to time, and atmospheric CO₂ concentration has been increasing during the last few decades, I have yet to see a plausible theory connecting anthropogenic CO₂ to significant temperature effects, like plus or minus 1C for say 10% changes in fossil fuel combustion. Any net steady-state effect appears to be vanishingly small. I believe there are numerous flaws in GHG theory.

I studied your website developed in late July 2010 with considerable interest:
<http://www.drroyspencer.com/2010/07/yes-virginia-cooler-objects-can-make-warmer-objects-even-warmer-still/>

My analysis and conclusions were posted 6Nov11 at:
<http://climaterealist.com/index.php?id=8610&linkbox=true&position=2>

The source I prepared is attached for your consideration: No Virginia Cooler Objects Cannot Make Objects Even Warmer Still edited.pdf

I attached my earlier publication: Thermostat CO₂ HPFeb10.pdf

I hope you find them interesting and informative. I welcome any claims of provable errors I may have made; I want to learn, I have no stake in the outcome.

My resume is available upon request.

Sincerely
Pierre R Latour, PE, PhD Chemical Process Control Systems Engineer
President, CLIFFTENT Inc., Houston

Spencer replied promptly.

From: Roy Spencer

Sent: Monday, November 07, 2011 5:49 PM

To: Pierre Latour

Subject: RE: No Virginia, Cooler Objects Cannot Make Warmer Objects Even Warmer Still

Hi Pierre:

Good to hear from you.

Rather than the hypothetical experiment with plates, etc., let me ask you one question:

Why does a hand-held IR thermometer measuring a clear sky apparent temperature of, say, 0 deg. F, increase its reading to, say, 40 deg. F when it is pointed at a low cloud, in both cases the ground air temperature being (say) 60 deg. F?

The point is that the sky-viewing portion of the thermopile warms when it is pointed at the cloud, even though the thermometer itself is warmer than the cloud. How do you explain that without downwelling IR radiation being part of the atmosphere's (and surface's) energy budget?

-Roy

To which Latour promptly replied.

From: Pierre Latour

To: Roy W Spencer

Subject: RE: No Virginia, Cooler Objects Cannot Make Warmer Objects Even Warmer Still, v1.1

Date: Tue, 8 Nov 2011 09:38:51 -0600

Dear Roy Spencer,

Both questions are easy. Your next to last sentence is correct.

Q1: Because that cloud can re-radiate absorbed solar radiation more intensely than transparent, low density air. IR pyrometers measure intensity of radiation (and corresponding Boltzmann temperature), a point property of EMR field at the receiving pyrometer sensor (thermopile), generated by some body, like a nearby cloud. (Gee, that sounds poetic, make a good song lyric.)

Thermometers and thermocouples measure a different point property, thermal temperature of matter, the molecules surrounding the bulb or thermocouple, like the surface air around it. Radiating matter has two different types of temperatures.

That is why we use pyrometers to measure radiation intensity of electric fields and thermometers to measure thermal heat intensity of gases, liquids and solids. (This is basic physics, chemical engineering and instrumentation business.)

One of many causes of confusion in the low level public literature on GHG is failure to understand these two temperatures and how they are related to two different physical phenomena and energy transfer mechanisms: radiation by 300k km/s pure energy field of zero mass and slow conduction/convection by matter.

Q2: So Earth's surface and atmosphere has two kinds of temperatures, just like a burning log or candle; one for radiant energy (mostly to space) and one for thermal heat (trapped in our thermos bottle). GHG theory is all mixed up. "Downwelling IR radiation", just like all radiation is certainly a part of Earth's energy budget; reflected, scattered, transmitted and absorbed (by colder molecules only).

The references I supplied do a better job answering your questions than I can.

Does your prompt abandonment of your hot plates thought experiment indicate you see I may have a point? How firm are you in your belief *Cooler Objects Can Make Warmer Objects Even Warmer Still*? If you have elevated that assumption beyond belief to knowledge and your mind is quite closed on the subject, please tell me in fairness; we are both busy.

Thanks for your prompt reply, questions and interest in my views. Feel free to ask more questions. Your reply made history; only the second time I know of where a meteorologist responded to a chemical engineer (Richard Lindzen did in 2009). Your attached TruthAboutClimateChangeOpenletterFeb11.pdf was sound engineering and an act of courage.

To learn why process control engineering standards for knowing truth exceed scientists, study attached FbKnwArtLtrs BentWinSpg11.pdf (my 2 cts on last page).

Pierre R Latour, Chemical Process Control Systems Engineer

To which Spencer promptly replied.

From: Roy Spencer

Sent: Tuesday, November 08, 2011 9:56 AM

To: Pierre Latour

Subject: RE: No Virginia, Cooler Objects Cannot Make Warmer Objects Even Warmer Still, v1.1

Pierre:

But the IR thermometer measurements can prove the same point at night, too! OK, so do the test INSIDE your house....let the IR thermometer warm up in your hand, then point it at the inside of a refrigerator (reading a cold temperature). Then point it at the outside of the refrigerator (reading close to room temperature). (Turn the light off in the room and do it again. Same result.)

And, yes, I am aware of the differences between thermometers, pyrometers, thermocouples, etc.

I have not abandoned the theoretical example of hot and cold plates...instead, the IR thermometer test described above is the most direct proof of the concept, which you can perform yourself. Because the lens-illuminated side of the thermopile is actually changing its temperature in response to changes in incident IR, and will warm even if the object it is viewing is colder than the thermopile (when its field of view is changed from the inside of the refrigerator to the outside).

Pierre, surely you are smart enough to recognize this as basic thermal radiation physics.

-Roy

There the matter rested until Latour attended Fred Singer's U of H seminar on February 6, 2012.

Open Letter to Dr S Fred Singer, American Thinker

By Pierre R Latour, PE, PhD Chemical Process Engineer, March 9, 2012

<http://principia-scientific.org/supportnews/latest-news/127-open-letter-to-dr-s-fred-singer-american-thinker>

Following your excellent seminar at the University of Houston on February 6, 2012, I introduced myself, indicated Greenhouse Gas Theory is a perpetual motion machine to drive anthropogenic global warming, violating First & Second Laws of thermodynamics, and emailed you my proof at No Virginia: <http://www.slayingtheskydragon.com/en/blog/185-no-virginia-cooler-objects-cannot-make-warmer-objects-even-warmer-still>

I noticed your February 29, 2012 post *Climate Deniers Are Giving Us Skeptics a Bad Name* <http://www.independent.org/newsroom/article.asp?id=3263> included items you did not cover at U of H.

“Now let me turn to the deniers. One of their favorite arguments is that the greenhouse effect does not exist at all because it violates the Second Law of Thermodynamics—i.e., one cannot transfer energy from a cold atmosphere to a warmer surface. It is surprising that this simplistic argument is used by physicists, and even by professors who teach thermodynamics. One can show them data of down welling infrared radiation from CO₂, water vapor, and clouds, which clearly impinge on the surface. But their minds are closed to any such evidence.”

First, I recognize your expertise at evaluating climate data and UN IPCC conclusions for validity; you are well-known to have proven GHG Theory effects on AGW are greatly exaggerated and not supported by any reliable data. You go further to claim CO₂ does cause warming, without proof or quantification. Your key seminar point was one cannot prove causality from trend data correlations as UN IPCC climatologists do. Process systems engineers learn this from birth. This is also why you cannot disprove causality from trend data either.

Second, I recognize this subject has experienced great and important controversy for many years. I can appreciate to achieve and maintain the reputation you now enjoy in the face of unfair attacks by GHG and AGW promoters calls for exceptional care and a compromising middle of the road approach. Your reporting skills are very convincing.

Third, you may be interested to learn your younger successors like me, whom you called skeptical deniers, are moving the debate from simply falsifying GHG Theory predictions with data, which you have already done, to getting it right with physics and engineering. Along that path, we have discovered some striking violations of the laws of engineering in the GHG Theory. Many were reported last year in a book, Johnson, C, A Siddons, H Schreuder, T Ball, C Anderson, J O’Sullivan, et al, “*Slaying the Sky Dragon*”, 2011. While I am unpaid and have no obligation to disprove the GHG Theory, you might like to learn about the much stronger intellectual arguments against that theory by your natural allies than merely analyzing data.

Fourth, you acknowledge that this thermodynamics “argument is used by physicists and even some professors who teach thermodynamics”. If my engineering support of that denier claim when I spoke to you personally at U of H prompted this acknowledgement, I am pleased.

Fifth, then you say you are surprised this thermo claim is used. Does this indicate you have not studied engineering thermo as carefully as UN IPCC data? Your adjective “simplistic” indicates

this to be the case, not any incorrectness of the thermo violation claim by engineers like me. Scientists and mathematicians consider simplicity like $F = mA$, $e = mC^2$, $c = \pi d$, $c^2 = a^2 + b^2$, $e^{i\pi} = -1$ to be virtues. Once you review my proof, you will find it almost as simple, perhaps even virtuous.

Sixth, I accept the data provided by you and Roy Spencer that the sky emits infrared radiation toward the earth. Everyone knows gas scatters and emits in all directions. But this does not prove that the warmer surface absorbs all or any of the back-radiation from cold CO₂ molecules, thus emitting more infrared than otherwise and heating the Earth. I took some care to describe this in English and math in my [No Virginia](#) post. If you can invalidate or validate my proof, that would help reconciliation. I recommend you brush up on absorptivity, emissivity, scatter, reflection, transmission and conversion of radiation by colorful matter.

Seventh, my post and personal email reply to you and Roy Spencer on this issue proves my mind is quite open to all such evidence. My testimony of provable fact refutes your allegation against me and your many engineering allies.

Eighth, as everyone knows or should know, the preponderance of evidence supports the correctness of thermo, to the point where anyone offering data to disprove those laws has a lot of work to do. It has been futile since engineer Sadi Carnot, 1824, so educated people refrain from wasting time and money on such nonsense.

Ninth, since my claim and proof, supported by physicists and professors known to you, that GHG Theory incorporates a perpetual motion machine to drive global warming in perpetuity is such a momentous result, and GHG Theory is such a ridiculous and falsified theory, it is fair to say your casual dismissal with this brief paragraph is quite unscientific and an affront to the engineering profession. It behooves you to study this science more carefully. You really owe them some evidence to support your charge "their minds are closed to any such evidence" or a retraction, to restore your sterling reputation.

Tenth, those Denier subgroups you identify in your last two post paragraphs seem well positioned and your dismissal of them was frivolous. I recommend you apply the same intellectual rigor you use to analyze UN IPCC data to any critique of your natural allies that are using well-known science and engineering to straighten out the GHG AGW mess invented by a narrow group in the fledgling area of meteorology research. Just because we are called skeptics and deniers does not prove we are wrong. In fact you should be aware that GHG AGW promoters have publicly injected a sinister inference to the meaning of the perfectly legitimate noun denier. I trust you did not intend that unfortunate meaning. Correct science comes from the first minority to get it right and is not necessarily in the middle of the road, where one can get run over. I fear many of your followers concluded: Climate Fence Sitters Are Giving Us Skeptics a Bad Name.

In your defense, you did a better job refuting UN IPCC nonsense than proving deniers are incorrect. I applaud your seminar tour of western US universities in February to publicize the inaccurate UN IPCC data and your corrections showing AGW is exaggerated and could be vanishingly small. Excluding your post paragraph from your seminar was a wise move. I just wish your mind was not closed to science, engineering and facts about many proven falsehoods of GHG Theory. I trust you find this scientifically accurate and welcome news.

From: S. Fred Singer
Sent: Sunday, March 11, 2012 8:01 PM
To: Pierre Latour
Cc: Roy Spencer; Lubos Motl; Will Happer; Ken Haapala; Tom Sheahen
Subject: Open Letter

Dear Pierre

I read yr Open Letter (received via John O'Sullivan)

<http://principia-scientific.org/supportnews/latest-news/127-open-letter-to-dr-s-fred-singer-american-thinker> and yr essay

<http://www.slayingtheskydragon.com/en/blog/185-no-virginia-cooler-objects-cannot-make-warmer-objects-even-warmer-still%20>

I am happy to respond but do not expect that you will be convinced by my arguments. So about the best I can do is to state my point of view as clearly as possible.

As I understand it you claim that anthropogenic global warming (AGW) is impossible since it violates the first and second law of thermodynamics -- acc to your essay "No, Virginia, cooler objects cannot make warmer objects even warmer still" dated 6 Nov, 2011

As I understand it, you deny existence of "Back-radiation" (often referred as downwelling infrared radiation). This Back-radiation comes mainly from CO2 and water vapor molecules in the atmosphere but is absorbed by the earth and therefore adds energy and heat to the energy received directly from solar visible radiation

I note that you have composed this essay in responding to Dr. Roy Spencer. So perhaps it would save time for both of us if I just associate myself with his position and his arguments.

I will only note that this downwelling radiation can and has been measured in studies, so there is little doubt of its existence. Once absorbed it must necessarily add energy to the earth.

In my opinion, this does not violate the laws of thermodynamics.

Best wishes

Fred

**S. Fred Singer, PhD
Chm, Science & Environmental Policy Project (SEPP)
1600 S. Eads St., Suite 712-S
Arlington, VA 22202-2907
<singer@SEPP.org>
1-703-920-2744**

From: Pierre Latour
Sent: Monday, March 12, 2012 3:46 PM
To: S. Fred Singer; Tom Sheahen
Cc: Roy Spencer; Lubos Motl; Will Happer; Ken Haapala; Tom Sheahen; Larry Bell;
Subject: RE: Open Letter Exchange v1

Dear Dr S Fred Singer,

Thank you very much for your response yesterday and analysis of the physics of radiation by Earth's atmosphere. I am grateful you took time to study my work. I assume you won't mind if I publish our exchange.

I rest my case.

Dr Singer is wise not to expect me to be convinced by his arguments, because he has no valid ones. All he is left with is his point of view, his opinion, as he honestly admits. He failed to answer any of my charges.

Actually he erred slightly in restating my position, a common debating trick. What I actually claimed is GHG theory is built on a notion of back-radiation in the infamous Kiehl-Trenberth diagram, which does indeed violate the laws of thermo and cannot exist in nature. Singer is the one who jumps to the logical conclusion AGW therefore violates thermo, apparently based on his deep knowledge of GHG theory for AGW and the essential role back-radiation plays in it. I am happy he made that connection and now I agree with it too. Success! Which is why this issue is important.

Singer restates my definition of back-radiation quite well, assigning it the property to be absorbed by warmer bodies than itself, and asserting "*is absorbed by the earth and therefore adds energy and heat to the energy received directly from solar visible radiation*" and repeats himself with great clarity "*once absorbed it must necessarily add energy to the Earth*".

Since his down-welling radiation emitted by cold CO₂ is already energy of the Earth, both statements are either imprecise expressions of what he means or more likely confirmation that he believes energy is indeed created by the GHG Theory back-radiation idea, driving AGW in perpetuity, in agreement with my contention and a direct violation of the First Law.

Then Singer associates himself with Roy Spencer "to save time", the policy of appeal to authority that prevailed from ancient times until [F Bacon](#) inaugurated the age of Reason in 1620 to supplant it. Kors, A, "[The Birth of the Modern Mind](#)", Teaching Company. That authority argument no longer washes. It was superseded by science some time ago. It is clear Singer cannot support his position by himself and relies on Roy Spencer to handle it. Since I already successfully debated Dr Spencer on the same issue, resting my case seems to be appropriate.

Your key seminar point was one cannot prove causality from trend data correlations as UN IPCC climatologists do. I agree; process systems engineers learn this from birth. This is also why you

cannot disprove causality from trend data either. Just because the sun rises from yonder hill exactly 15 minutes before the rooster crows does not mean that rooster causes the sun to rise each day, fifteen minutes after he crows.

While Tom Sheahen does not quite address my argument, he is suspicious of GHG Theory as well. He may be skeptical, even a denier. He certainly does not dispute my analysis or support Singer. Sheahen asserts his central point that radiation into and out of a particular molecular band is not blackbody radiation. He understands CO₂ molecules don't just absorb, they emit as well. I shall accept it until I find a falsification, because black-bodies are a theoretical simplification of reality. I do think Earth's matter is colorful. Which is why EMR is reflected, scattered, transmitted or absorbed and emitted. There is more to it than GHG Theory Kiehl-Trenberth diagram. It is called quantum chemistry and chemical engineering.

I rest my case. I am your natural ally.

Pierre R Latour, PE TX & CA, PhD Chemical Engineer
President, CLIFFTENT Inc.
Houston

From: S. Fred Singer
Sent: Monday, March 12, 2012 4:54 PM
To: Pierre Latour
Cc: Tom Sheahen; Roy Spencer
Subject: RE: Open Letter Exchange v1

Dear Pierre

Feel free to publish anything I have written to you --
as long as you publish in toto and not selectively

Also pls state explicitly: that I do not accept yr claim that we are in agreement.

Best Fred

PS I want you to know that I am sending Bcc to several others

-----Original Message-----

From: Roy Spencer
Sent: Monday, March 12, 2012 8:24 PM
To: Pierre Latour
Cc: S. Fred Singer; Tom Sheahen; Lubos Motl; Will Happer; Ken Haapala; Tom Sheahen; Larry Bell
Subject: RE: Open Letter Exchange v1

I must admit, I seem to be less critical of appealing to authority...when I'm the authority. ;)

-Roy

From: Pierre Latour
Sent: Tuesday, March 13, 2012 9:29 AM
To: S. Fred Singer
Cc: Tom Sheahen; Roy Spencer; Claes Johnson
Subject: RE: Open Letter Exchange v2

Dear Fred,
Excellent. Thanks for another quick response yesterday. Glad you Bcc to others. I did as well. Dr Roy Spencer was kind enough to endorse your position below.

Your confirmation of Dr Spencer's physics that the concept of back-radiation from cold CO₂ molecules is absorbed by Earth's warmer surface and reemitted more intensely than the cold CO₂ molecules did, warming Earth, is a basic tenant of the Greenhouse Gas Theory is significant.

Summary of our positions explicitly: I agree with your description of back-radiation as you wrote it and I copied it. You disagree. I agree with your main seminar point one cannot prove causality from trend data correlations. You disagree.

Fair enough. I guess it is in the hands of the jury now. May they discover the truth.

You have taught me and many others the importance of the flawed GHG theory underpinning the AGW forecasts. I hope we can agree on that (you really have taught me).

Should you care to learn about the experimental data that disproves cold radiation is absorbed and emitted from hot bodies, consider:

1. As two 100 watt incandescent light bulbs are brought together, their filaments continue to radiate 100 watts each, no matter how close they are.
2. As two focused reflecting headlights are directed at and approach each other, neither emits more brightly due to absorption from the other.
3. Moonshine does not warm hot surfaces during daytime.
4. GHG Theory back-radiation is never observed in natural gas fired furnaces, forges and boilers, heating flames even more. Engineers do not design radiant heat transfer equipment on that basis.
5. As colder IR emitting clouds pass overhead, their down-welling IR, detected by photometers, is not observed to be absorbed by hotter ground surfaces and is not re-radiated back up, warming the cold clouds one whit. For one thing the photometers Dr Roy Spencer reports pointing at the clouds are pointing in the wrong direction.

6. Cold, radiating CO₂ molecules at 10 km may shine down the radiation they absorb from Earth's surface and emit it in all directions, but it has never been observed to be reabsorbed by hot surfaces below.
7. The radiating colder plate hypothesized by Dr Roy Spencer does not heat the hotter one radiating to it, because energy does not transfer from cold bodies to warmer ones.
8. GHG Theory of back-radiation from CO₂ creating energy has never been observed because it does not exist in nature.
9. Your suspicions should have been aroused when you read the quantities in the Keihl-Trenberth diagram were proclaimed rather than derived from physics, accounting for reflection, scattering and inverse square law and Beer-Lambert Law.
10. Reviewing my eight years of university science and engineering text books, all my professional acquaintances and all my readings since 1957, the literature of quantum chemistry and GHG Theory, I never encountered anyone promoting the notion cold body back-radiation warms hot bodies until Roy Spencer [in July, 2010](#) and you in [February, 2012](#). I cannot find any reference to quantify it. While being a minority of two does not make you wrong, it does make you a small minority.

The scientific and engineering consensus on this matter is universal because the data is overwhelming and thermodynamics rules.

Prof Claes Johnson has adopted a position similar to mine:

<http://claesjohnson.blogspot.com/2012/02/fred-singer-believes-in-backradiation.html#comment-form>

His reasoning is at:

<http://claesjohnsonmathscience.wordpress.com/2012/03/01/two-proofs-of-plancks-law-vs-backradiation/>

With a bit more at: <http://claesjohnsonmathscience.wordpress.com/2012/03/02/from-spectrum-to-heat-transfer/>

If you care to identify those physicists and professors you mentioned who agree GHG Theory violates the laws of thermo, I would be pleased to learn about their reasoning. If you come across any science to support your GHG Theory position, many like me would be pleased to review it.

I look forward to your next report on UN IPCC publications. I hope we can agree on that (I really look forward) as well.

Best regards, Pierre R Latour, Chemical Engineer Student and Teacher Simultaneously

From: Dick Lindzen

Sent: Wednesday, March 14, 2012 10:08 AM

To: Pierre Latour

Cc: S. Fred Singer; Roy Spencer; Tom Sheahen; Claes Johnson

Subject: RE: Open Letter Exchange v3

Dear Pierre,

This rather bizarre 'discourse' seems to be centered on the fact that the greenhouse effect that you are criticizing is essentially the one presented by Gore and possibly implicit in the Trenberth-Kiehl figure. This is not the greenhouse effect that Roy, Fred and I are talking about. The one we are talking about is the one that is actually working in all radiative convective calculations and in GCMs. Why don't you spend the little time needed to understand the difference?

Dick

-----Original Message-----

From: Claes Johnson

Sent: Wednesday, March 14, 2012 10:15 AM

To: Pierre Latour

Cc: S. Fred Singer; Roy Spencer; Tom Sheahen; Richard S. Lindzen

Subject: Re: Open Letter Exchange v3

Dear Pierre:

I fully support your efforts to come to grips with the misconceptions carried by Roy and Fred (and probably also Lord M and Lindzen) as leading skeptics, of a greenhouse effect operating on "backradiation" or "downwelling" long wave radiation, misconceptions which are deeply troubling to the skeptics cause. I have myself tried to come to a constructive discussion with Roy and Fred, but I have not been successful.

I discuss the "greenhouse effect" extensively on my blogs, e.g. in posts like

<http://claesjohnson.blogspot.com/2012/03/can-greenhouse-effect-be-detected.html>

<http://claesjohnsonmathscience.wordpress.com/2012/03/02/from-spectrum-to-heat-transfer/>

Sincerely, Claes

-----Original Message-----

From: Roy Spencer

Sent: Thursday, March 15, 2012 8:42 AM

To: Pierre Latour

Cc: Dick Lindzen; S. Fred Singer; Tom Sheahen; Claes Johnson; Larry Bell

Subject: RE: Open Letter Exchange v4

Pierre:

Since Dick might be too polite to respond, I will.

When a scientist wants to learn what is known on a certain subject, he/she reads the pertinent literature. This is not easy, but it is also not our jobs to educate you on a difficult subject.

You could ask me to prove from first principles that force equals mass times acceleration ($F=MA$), but I am either going to ignore your request, or ask you to read the literature first.

Your requests waste everyone's time, and you seem to believe a lack of response means your views and criticisms have merit, when in fact they have too little merit to deserve a response.

If you want to play in this game and be taken seriously, do what scientists do...go do your homework first.

-Roy

-----Original Message-----

From: Claes Johnson

Sent: Friday, March 16, 2012 3:28 AM

To: Pierre Latour

Cc: Dick Lindzen; S. Fred Singer; Roy Spencer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

Dear Prof Lindzen

I follow up the previous post on the "greenhouse effect" in

<http://claesjohnson.blogspot.com/2012/03/richard-lindzens-greenhouse-effect-2.html>

Is it correct that you accept the Basic Postulate of 1 C used by IPCC as a scientifically motivated starting point in assessments of climate sensitivity?

You have not responded to earlier letters, but maybe you could spare a few minutes to answer my question?

Sincerely, Claes Johnson

-----Original Message-----

From: Claes Johnson

Sent: Thursday, March 15, 2012 3:44 PM

To: Pierre Latour

Cc: Dick Lindzen; S. Fred Singer; Roy Spencer; Tom Sheahen; Larry Bell;
Subject: Re: Open Letter Exchange v4

Dear Prof Lindzen

I have commented your view that the discussion Pierre Latour and myself are seeking, is bizarre in a blog post:

<http://claesjohnson.blogspot.com/2012/03/lindzens-bizarre-greenhouse-effect.html>

I would appreciate if you could clarify your view on the nature and physics of the "greenhouse effect", in particular on the role of the "backradiation" you are referring to in the cited article of yours.

Sincerely, Claes Johnson

From: Pierre Latour
Sent: Friday, March 16, 2012 10:46 AM
To: Dick Lindzen
Cc: S. Fred Singer; Roy Spencer; Tom Sheahen; Claes Johnson; Larry Bell
Subject: Next Exchange, Lindzen & Latour

Dear Prof Richard Lindzen,

I am surprised you don't want to talk about it. I hope you are not upset with me. You welcomed my inquires in the past. You are a preeminent teacher and writer on Greenhouse Gas theory. Every professor I ever met considered teaching a noble profession.

I thought you requested me to get you up to speed on what Singer and I were discussing. I am not aware of the points you have asked me to address; I think I answered your inquiry to clear up any confusion rather completely, to the best of my ability, with references. I cannot find support for Singer's paragraph I quoted. You initiated this exchange, not me. If I failed to address what you are interested in to your satisfaction, I regret it. So I will close out your prior exchange and attempt to reply to your new one.

I did indeed suggest you assess my views before attempting to debate them, but I did not "insist" upon it. My suggestion is a standard requirement of academic debate. Even Roy Spencer recently called for it. Do you accept Roy Spencer's [Yes Virginia](#) claim cold radiating bodies heat warmer ones?

If my answer made you uncomfortable or angry, that could indicate you have a problem, calling for research. If any oxen were gored by my honest reply, it certainly was not my attention. If you are too busy to fool with engineers, I respect that. Heck, I can't even tell where you

disagree with me. If you disapprove of me communicating with Spencer and Singer, I will take that under advisement, with them.

From this outside observer, the scientific basis for Spencer, Singer, Lindzen back-radiation theory is very thin and incoherent. Which is why you all have so much difficulty defending it. You merely assert it as dogma. Just look at the rebuttals in Spencer's blogs! In your [Regulation, Cato](#) I am keen to confirm your assertion in first paragraph of Greenhouse Effect section, "So the Earth must heat up somewhat more to deliver the same flux of infrared radiation to space."

Now that you, Dr Spencer and Dr Singer are on notice a proof with backup evidence exists that the GHG Theory involves a perpetual motion machine, ethics calls you to 1) refute the proof, 2) study it and refrain from endorsing GHG Theory until the matter is settled, or 3) accept the proof and encourage others to stop working on a GHG Theory perpetual motion machine too.

I shall continue to read your publications even if you don't want to read mine. I promote open debate, intellectual dialog and education. [Heartland](#). (Heartland dropped your speech video May 17, 2010 in Chicago.)

Once I evaluate your model $T = T_0/(1 - f)$, I will keep it to myself until you ask for it. My plan is to verify the three variables relate to measurable phenomena, at least two can be determined from fundamental constants or well-known physical properties, the relation between them is based on established laws of physics, the relation fits data, the relation has predictive power, it contributes to knowledge and it is useful. Then I will make use it. Of course if you or your students have already done and published any of this, I would welcome it; I do not want to reinvent the wheel. I hold your work with such respect that I do not care about peer-review. I am not the enemy here. I consider myself your student and ally.

MIT prof: "[there won't be much warming due to CO2](#)"

Welcome your appraisal of Prof Claes Johnson's physics on your research interests. His genuine interest indicated below.

Respectfully, Pierre R Latour, Meteorology Student, US Taxpayer

-----Original Message-----

From: Claes Johnson

Sent: Thursday, March 15, 2012 11:17 AM

To: Roy Spencer

Cc: Pierre Latour; Dick Lindzen; S. Fred Singer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

As a scientific statement it is a triviality because nobody would doubt it. You are repeating a triviality but why?

What is it you are so eager to say? Without saying anything.

Claes

-----Original Message-----

From: Roy Spencer

Sent: Thursday, March 15, 2012 10:14 AM

To: Claes Johnson

Cc: Pierre Latour; Dick Lindzen; S. Fred Singer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

My blog post simply points out that less infrared energy escaping from the Earth to space leads to net energy accumulation, and a temperature increase.

If you consider conservation of energy a "triviality", I cannot help you Claes.

-Roy

-----Original Message-----

From: Claes Johnson

Sent: Thursday, March 15, 2012 9:52 AM

To: Roy Spencer

Cc: Pierre Latour; Dick Lindzen; S. Fred Singer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

No Roy, this is a very important discussion which you attempt to kill with ridicule. Why not instead present your greenhouse theory, if you have one.

What you presented in Alabama two-step is a triviality.

You have taken an important role in the debate and you have a responsibility to live up to.

Claes

-----Original Message-----

From: Roy Spencer

Sent: Thursday, March 15, 2012 9:17 AM

To: Claes Johnson

Cc: Pierre Latour; Dick Lindzen; S. Fred Singer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

Claes, are you suggesting it is unscientific to ask someone to do a little studying up, rather than agreeing to be tutored by us on the meaning of acronyms and other basics?

You are lucky that some of us still have enough patience to even respond to your comments. I sometimes get the feeling you only bait us so that you will have material for your blog.

-Roy

-----Original Message-----

From: Claes Johnson

Sent: Thursday, March 15, 2012 8:57 AM

To: Roy Spencer

Cc: Pierre Latour; Dick Lindzen; S. Fred Singer; Tom Sheahen; Larry Bell

Subject: Re: Open Letter Exchange v4

Hi Roy:

I have commented your clever answer to Pierre on my blog as

<http://claesjohnson.blogspot.com/2012/03/what-is-greenhouse-effect.html>

Why not keep a scientific discussion about scientific issues?

Claes

From: Pierre Latour

Sent: Friday, March 16, 2012 10:47 AM

To: Roy Spencer

Cc: Dick Lindzen; S. Fred Singer; Tom Sheahen; Claes Johnson; Larry Bell; Marc Morano

Subject: RE: Open Letter Exchange Spencer v5

Dear Dr Roy Spencer,

Good to hear from you again. I respect authority, particularly when it is correct. Clever reply on March 15 below. I deduce you selected Option 3: Adopt GHG Theory in my email (I deny it was angry or belligerent). May I publish our exchanges?

Agree on research. When a professional engineer wants to learn what is known on a certain subject, he/she reads the pertinent literature. Then evaluates it, draws conclusions, categorizes it as information, belief or knowledge, and tests it if they are so inclined. Sometimes it is easy; sometimes it is hard. Depends on the ability of the author and the reader; the teacher and the student; complexity of the subject.

Authority 101. What is the source of your authority? Limited to what fields? What are your credentials? Are you an authority on engineering thermodynamics? Why do you believe you are competent to recognize when a theory will result in a perpetual motion machine and can you provide reasons to certify GHG Theory does not constitute one? Have you ever done it? Do you know the difference between the First Kind and the Second Kind? Would you like me to guide you to the appropriate references? Are you an authority on detecting attempts to build perpetual motion machines? (I am.) If you have any problems or questions about my helpful [No Virginia](#) rebuttal, are you able to formulate them? Are you aware the main reason great engineers like Michael Faraday, Thomas Edison, George Westinghouse and Henry Ford refrained from working on perpetual motion machines was because they were avid students of their predecessor engineer, [Sadi Carnot](#), 1824? Do you know what he proved? Cold plates don't heat hot plates. Do you have any issues with these other engineers, or just me?

Position of authority. Some perceive your position on a high mountain, in a tall ivory tower, on top of a pinnacle, inside clouds that look like fog. Seriously. I am just trying to save you from embarrassment. Honestly. Why would you object to an engineer reviewing your work?

Job. If you do not consider it your job to educate students of GHG Theory on how radiation downward from cold CO₂ molecules is absorbed by warmer Earth's surface and back-radiated to drive global warming in perpetuity, why in the world did you create two blog essays to do precisely that? What other purpose did you have in mind? Your first [Yes Virginia](#) on July 23, 2010 did not go over so hot; your second [Alabama Two Step](#) attempt on March 14, 2012 flopped more quickly. Was it a response to Dr Fred Singer's March 11, 2012 request of you to defend him? Would you be interested in a low cost professional peer review of your Alabama Two Step by a Texas Two Stepper? You got 250 replies in first 48 hours! Many thoughtful ones rebutted you with less care than I did. Don't tell me there is wide consensus supporting your position. In fact Alabama Two Step was quite a step back from your Yes Virginia, at least two. Dr Singer must be disappointed in your performance defending his indefensible support of perpetual motion machines. No new physics. Where is the beef? What is your job anyway? Since you and Dr Singer deny the Second Law of thermo applies to "down-welling" radiation from cold to hot matter, I have an impeccable reference that says you are deniers too, Webster's Dictionary.

It is not my job to prove GHG Theory embodies the notion of a perpetual motion machine to sustain AGW, I just did it as a favor to you. It is your job to deny it because you publically affirmed it in July 2010 [Yes Virginia](#).

Do you consider yourself a teacher, a student, or neither? I ask that because some who have tried to teach you about how radiation works feel despair at your inability to learn.

Literature. If you wish me to infer that you claim I have not read the pertinent literature before daring to rebut you, you need some evidence to back up that charge. I reported I read your essay and all bloggers. You did not demand that of any of your bloggers, many of whom refuted your essay, just as you invited us to do, so why single me out for unfair innuendo? Your proper

move was to 1) refute my rebuttal if you can, 2) acknowledge you are analyzing it carefully, 3) accept it with professional grace, or 4) cover up my rebuttal. When a debater resorts to personal attacks it is a clear sign they realize they lost the debate but lack the ability to admit it. I learned this law of human nature in high school debate club, 1955. When a debater resorts to saying his opponent "wastes everyone's time", that is considered a very weak reason for avoiding or blocking debate. Professional engineers are trained not to do that. Court juries are too.

I have read Roy Spencer's, "[Climate Confusion](#)" and "[The Great Global Warming Blunder](#)" with respect. Have you had a chance to read my [No Virginia](#), specifically written to help you? Or Martin Hertzberg's description of spectra I sent you? Or Johnson, C, et al, "[Slaying the Sky Dragon](#)"? Check its Amazon book reviews! While I like your books, I find the literature by GHG Theory promoters and UN IPCC quite appalling. So does Dr Singer. You and Dick Lindzen had a hand in teaching me that. I have an extensive list of flaws in GHG Theory, just as egregious as its perpetual motion machine. No wonder it predicts nothing; it is made out of nothing. And do not say I deny CO2 has no effect on Earth's temperature; because I never said that so it would be a lie. Vanishingly small does not mean identically zero. Webster's Dictionary. Everything affects everything else. So what?

Wasting time. Can you identify just whose time I am wasting? Or is that just a space wasting euphemism? Besides, how in the world can you accuse me of wasting everybody's time when I never asked you or anybody to read or do anything? Remember you were gracious enough to exchange with me last year. Why have you changed? Just delete! Ignore. Close your eyes and ears. Pray I will keep quiet. You are free not to study the Second Law. Given all the time and money wasted since Kyoto 1997 working on the GHG Theory perpetual motion machine, anything I can do to curtail it will save an enormous amount of humanity time, approaching an infinite amount since perpetuity is so long. Care to join this engineer in something really useful?

Ethics. Now that you, Dr Lindzen and Dr Singer are on notice a proof with backup evidence exists that the GHG Theory involves a perpetual motion machine, ethics calls you to 1) refute the proof and evidence, 2) study it and refrain from endorsing GHG Theory until the matter is settled, or 3) accept the proof and encourage others to stop working on the GHG Theory perpetual motion machine too.

I assure you the purpose of my rebuttal was to inform, purely educational. I meant no offense. If you consider it a personal attack, you may have a problem, calling for research. By the way, did you actually read my rebuttal? Before crafting your clever email?

Proof requested. I do indeed ask you to prove from first principles your very important public back-radiation claim. Or at least provide some references to support it. Asking your students to scour www and Library of Congress to verify your bizarre claim cold heats warm asks too much. You are free to ignore mine and ask me to read more unspecified literature until the cows come home, but that simply confirms your No Virginia essay cannot stand on its own. Your second essay blog creation on the same subject, Alabama Two Step, shows you concluded your first

one didn't express what you meant to your satisfaction or do the job you intended. To be clear, it didn't pass muster. I welcome your next attempt.

Your essays are incoherent to me (and many others) either because they are incoherent or I don't understand what you mean. When I rebutted [Yes Virginia](#), I did you a favor. That is the essence of academic debate and the engineering method. I find your debating skills rather weak as well. Here is a test: Is there such a thing as a stupid question? (Hint: think very carefully before you answer, it could be a trick question.)

Rights. I believe lack of response means don't know or don't care, i.e. not interested, agree, disagree but unable to learn. I am free to conclude whatever I wish to conclude. So are you. To do otherwise would be presumptuous. What do you do when millions of people do not respond to your views? Put them down? Dismiss them out of hand? Do as you wish.

Maybe you are unwilling to grant me the freedom to disagree with you, which is natural for competent authoritarians; but I respect your freedom to disagree with me, which is natural for competent students.

Prof Johnson. Regarding your comments to Claes Johnson about me below, here are some rejoinders. Are you upset with me? When did I "tutor you on acronyms and other basics", and if so what's wrong with that? First rate scholarship calls for careful definitions, particularly acronyms. US Army taught me that, 1957. Don't you like tutors? I liked Dr Singer's seminar! What evidence do you have I didn't do "enough studying up" to help answer your Yes Virginia question? Why have you so little patience? It is a virtue you know. I could not find any science or knowhow in your answers to Prof Claes Johnson. He was clearly trying to help. Have you found any errors in Johnson's radiation physics?

Authority 102. Returning to authority, I claim an inalienable right to read, write, do arithmetic, study, analyze, think and speak for myself. When I decide I am ridiculed, intimidated, threatened, unfairly accused, or bullied by authoritarians, I naturally become concerned, nervous, fearful, worried. Most of the time I deem it wise to cease talking, writing, analyzing, even thinking. I can even fake agreement to save my skin. So Dr Roy Spencer, Authoritarian, if you intend to intimidate me into silence and obedience, I am willing to declare you the victor. Feel better now? Ask and you shall receive. I do not consider debating the merits of GHG Theory a game, sir. Disappointed that you do, after all the good work you have done. The subject is very serious. Take my word for it; on my authority.

Prof Lindzen. I agree Dick Lindzen is a polite, civil, reasonable, careful professor of science and an excellent writer on many subjects. He is a gentleman. Admirable. He wisely withdrew from defending Dr Fred Singer and you on this matter. I am not so good at clever lines, tricky claims, vague inferences, innuendos, [double entendre](#) and double talk as you. I do better with straight analysis of facts, laws of nature, economics and engineering. Some call us nerds. Colleagues who know call me an engineer. So does Texas and California. Member of Tau Beta Pi since April

20, 1961. Worked for NASA 1967-69. Seen the Second Law of thermo in action around the world since my first US Patent for DuPont, 1958, on fiber annealing.

Peace. See, that wasn't so hard after all. I respect politeness. Sign of maturity. That is the reason I refrain from attacking people except in self-defense. Thanks for the opportunity to clear the air. Reconciliation work is worthy. Feel free to publish my reply if you wish. I believe in education. If you have any questions for me, feel free to ask. You don't even need to do any homework. I am not the enemy here; I am your natural ally. CO2 is green plant food.

Pierre Latour, PE Texas & California

From: Pierre Latour

Sent: Saturday, March 17, 2012 6:00 PM

To: Marc Morano

Cc: Dick Lindzen; S. Fred Singer; Tom Sheahen; Claes Johnson; Larry Bell; Roy Spencer

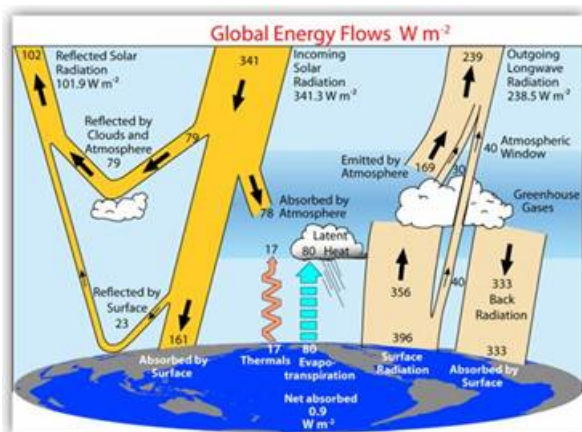
Subject: Perpetual Motion Machine Work

Marc,

I discovered GHG – AGW promoters are relying on a Perpetual Motion Machine, PMM12, to drive warming in perpetuity!

Remember me, the registered chemical process control engineer you placed in [US Senate 700 Dissenters List](#), pg 87 because I proved during 1997 Kyoto any thermostat for whole Earth adjusting fossil fuel combustion would never work?

Good Stuff. Well many engineers have studied a basic tenet of GHG Theory: cold atmospheric CO₂ radiates IR back down with sufficient intensity that Earth's warm surface, that radiated it up to them, will absorb all of it and radiate it back up, as shown in famous Kiehl-Trenberth diagram explaining GHG Theory that drives AGW. They concluded that 333 w/m² Back Radiation at far-right would constitute heat transfer from cold to hot, a violation of the Second Law of thermodynamics.



Dr Roy Spencer brought this issue to the world's attention in July, 2010 with [Yes Virginia](#). I looked into it and discovered that back-radiation assumption mathematically leads to energy creation, just what AGW promoters need to drive AGW. I posted my analysis [No Virginia](#). Cold plates do not warm hot plates. Prof Claes Johnson has the [quantum physics](#) to explain why radiation doesn't work that way. This means a perpetual motion machine concept, PMM, is the real foundation of GHG Theory and explains why that theory cannot predict anything, there is nothing to it. Until the world realizes they are wasting time and treasure in perpetuity researching to build an impossible thermostat with a PMM, they will continue working, researching and spending in perpetuity. We are talking about real money here, eventually

Since then Dr Fred Singer personally confirmed to me he knows of other scientists and professors that share that conclusion. A dialog on the matter ensued between Dr Roy Spencer, Dr Pierre Latour, Dr Fred Singer, Dr Richard Lindzen and Dr Claes Johnson. I copied you on some. I have collected the Spencer-Latour-Singer-Lindzen-Johnson exchange in attached Singer Letter 9Mar12.pdf.

You will note Lindzen says our exchange "seems to be centered on the fact that the greenhouse effect that you are criticizing is essentially the one presented by Gore and possibly implicit in the Trenberth-Kiehl figure." Since that is precisely the greenhouse effect we are criticizing, I assume Dr Lindzen has some misgivings about that theory like so many engineers do and may be open to reviewing my thermodynamic analysis, supported by physics Professor Claes Johnson.

Spencer, Singer and Lindzen may not have studied my findings in detail yet, or agree with all my conclusions, but they are interested. In any case, since there is so much confusion and controversy on this point, I think the attached should be published and I offer it to Climate Depot. If Spencer, Singer and Lindzen serve on your CFACT advisory board, they should be aware of my overture. That's why I copied them. If you think it more appropriate for me to post at one of Climate Depot links like: [Climate Realists](#) or [Climate Change Dispatch](#), please advise.

More Good Stuff.

Sen. Inhofe was on Hannity, Fox News last night promoting his new book [The Greatest Hoax](#). I'll get it. Bet he would like to know about my PMM findings and tell Barbara Boxer all about it. This could turn the Nov 2012 election if a candidate gets it and figures out how to communicate as well as you do. The next time Dr Steven Chu, Physicist, Secretary DoE comes to BP west Houston, right next door to my house, ask him to look me up and I'd be glad to explain energy engineering and investing, if he buys me Tex-Mex lunch from his green budget.

My 2008 back of the envelope chemical engineering analysis of transportation fuel from **algae** showed it won't work either. And chemical engineers know how to convert natural gas, CH₄, into transportation fuels like gasoline, diesel and jet. With existing infrastructure. Good profit when crude oil is > \$50/bbl (today \$105) and NG < \$5/mcf (today \$2.5). Make mogas for >\$2/gal easy (today \$5). Secret? Partial oxidation of any hydrocarbon like NG and coal, to syn gas and then [Fischer-Tropsch](#) synthesis, used by Germany in 1940 and Sasol SA today. But Democrats will never allow such a plant on US soil. Prefer to ruin balance of payments. Learn from ClimateDepot.com.

Pierre R Latour, PE Texas & CA, PhD Chemical Engineer,
President, CLIFFTENT Inc., Houston

Whenever he thought about it, he felt terrible. And so, at last, he came to a fateful decision. He decided not to think about it. Woody Allen.

There comes a time to take the bull by the tail and face the situation. WC Fields

The noblest pleasure is the joy of understanding. Leonardo da Vinci

What is the difference between ignorance, apathy and ambivalence? I don't know, and I don't care one way or the other. William Safire

A rumor is not responsible for who believes in it. Rumor

A thousand \$ invested at just 8% for 400 years grows to \$23 quadrillion. But the first 100 years are the hardest. George Carlin

No matter how cynical you get, it is impossible to keep up. Lily Tomlin

It would be more impressive if it flowed the other way. Oscar Wilde on Niagara Falls

It doesn't matter how beautiful your theory is, it doesn't matter how smart you are. If it doesn't agree with experiment, it's wrong. Richard Feynman, Nobel Prize winning Physicist for quantum mechanics, CalTech.

Those who stand for nothing fall for anything. Alexander Hamilton

Chemical engineers don't get no respect. Pierre R Latour

CO₂ is green plant food. Pierre R Latour

Dr Nasif Nahle Sabag publishes his experimental confirmation cold radiation does not heat warmer bodies on March 16, 2012.

From: Pierre Latour

Sent: Monday, March 19, 2012 5:28 PM

To: Nasif Nahle; Dick Lindzen; S. Fred Singer; Claes Johnson; Larry Bell; Roy Spencer; Alan Siddons; Marc Morano

Cc: Dr. Timothy Ball; Dr. Martin Hertzberg; Dr. Charles Anderson; Hans Schreuder; Louis Hissink; John O'Sullivan; Alberto Miatello; Dr. Jerry Todd; Dr. Jinan Cao; Dr. Klaus Kaiser; Alberto Boretti; Bob Webster; 'kevinK'; Bob Asworth; Joe Postma; Piers Corbyn; Joe Bastardi; Ken Coffman; Dr. Geraldo Lino; Dr. Matthias Kleespies; Dr. Oliver Manuel; Douglas Cotton

Subject: RE: Time off - & Explosive new Nasif Nahle Paper

Prof Nahle,

Well done! http://www.biocab.org/Observation_Backradiation.pdf

The reason you can't detect it is because what follows naturally from the back-radiation assumption, a violation of the Second Law, is **the change in energy rate to surroundings is**

$$E_s = [(1 + k) * K * F_0 + (1 + K) * k * f_0] / (1 - kK) - K * F_0.$$

K is absorptivity, the fraction of radiation from the first bar absorbed by the second colder bar, $0 < K \leq 1$.

k is absorptivity, the fraction of re-radiation from the second bar absorbed by the first hotter bar, $0 \leq k \leq 1$. Given $F_0 > 0$. Given $f_0 \Rightarrow 0$.

For any $K > 0$ and $k > 0$, $E_s > 0$ (because the first term $> K * F_0$). This would constitute creation of energy, a violation of the first law of thermodynamics.

Since K may be > 0 , $E_s = 0$ if and only if $k = 0$ (because first term $= K * F_0$).

Since this is the only possible solution, k must be identically zero, so no cold back-radiation is absorbed. QED.

I spelled out the story and proof the infinite back-radiation sequence converges to E_s for Dr Roy Spencer and his followers November 8, 2011 at No Virginia:

<http://www.slayingtheskydragon.com/en/blog/185-no-virginia-cooler-objects-cannot-make-warmer-objects-even-warmer-still>

This means since $E_s = 0$ according to laws to thermo, there is nothing there. When people work in violation of the Second Law they work on a Perpetual Motion Machine of the second kind, PMM2. When it results in a violation of the First Law as well, they are also working on a Perpetual Motion Machine of the first kind, PMM1. It follows that when you work on GHG Theory back-radiation you work on PMM12.

You and Prof Claes Johnson were among several who inspired me. Nothing like a good theory to predict results of a careful experiment and a good experiment that confirms a good theory. We are now entitled to call it a Law of Nature until something better looking comes along. I formally declare I deny the existence of back-radiation as I have defined it.

If Dr Roy Spencer can prove us wrong; he and we are better off. If we can prove Dr Roy Spencer is wrong, he and we are also better off. In either case humanity is better off; that is how engineering science adds value. If the back-radiation stalemate persists nobody is better off. I say the ball has been in Spencer's court since November 2011. Your paper makes us better off because it gives Dr Spencer and the rest of us a learning opportunity.

While I have not been shown CO_2 has nothing to do with AGW, I have not been shown the contrary either. I remain skeptical, naturally.

Pierre R Latour, Chemical Engineer

Alabama Two Step Post by Latour 1630, March 20, 2012

<http://www.drroyspencer.com/2012/03/slaying-the-slayers-with-the-alabama-two-step/#comment-39801>

Conclusion. Dr Roy Spencer's [Alabama Two Step](#) essay, after my [No Virginia](#) chemical engineering rebuttal of his [Yes Virginia](#) essay, confirms he and his followers really do believe the basic GHG Theory assumption that down-welling back-radiation from cold CO₂ molecules is actually absorbed by Earth's oceans, deserts and jungles. The same way moonshine, reflected Sunshine, is absorbed night and day. The same way moonshine, reflected Earthshine during lunar eclipses, is absorbed night and day.

You convinced me; I am finally willing to concede you believe all this.

Are you willing to concede I don't, because I believe it constitutes a Perpetual Motion Machine?

<http://www.slayingtheskydragon.com/en/blog/185-no-virginia-cooler-objects-cannot-make-warmer-objects-even-warmer-still>

The End?