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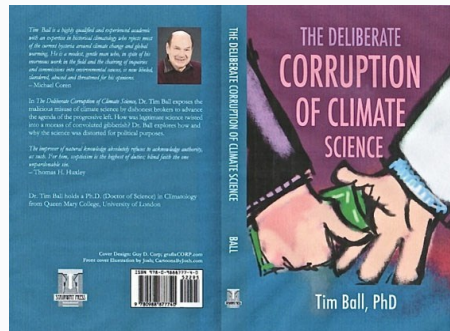
FEB 17 REVIEW: 'THE DELIBERATE CORRUPTION OF CLIMATE SCIENCE' BY DR. TIM BALL

Written by Hans Schreuder & John O'Sullivan on 17 Feb 2014

In this mind-blowing book '[The Deliberate Corruption of Climate Science](#),' one of the world's leading sceptic climatologists, Tim Ball, presents us with the evidence as to why the UN IPCC is nothing more and nothing less than a politically contrived organisation. This is the book Ball has been eager to publish the moment he was free of the censorious legal shackles imposed upon him three years ago when Penn. State University's Michael Mann ('hockey stick' graph fraud) filed a [libel suit](#) against him in Canada.

Here, the Intergovernmental Panel on Climate Change (IPCC), the supposed world authority on matters of climate, is demonstrated to be a tight-knit and politicized advocacy group – a "cabal" as Ball calls them, that has cost the world multi-billions of dollars for no result whatsoever. Today we may see for ourselves why Ball correctly adjudged that Mann (and others) should be in "the state pen, not Penn. State."

The book leaves no stone unturned when it comes to identifying the serious damage to climate science – and government-funded science in general - that the University of East Anglia's Climate Change Unit (CRU) has brought upon the entire issue of so-called man-made climate change. The damage the UN's 30-year "green agenda" has done to modern industrial progress cannot be underestimated, says Ball. Much of the science is fudged, if not outright faked.



In an interview with Radio America's Greg Corombos about the new book, Dr Ball tells his audience that today's anti-industrialists are the latest incarnation of a misguided cause that goes back to the 19th century writings of Thomas Malthus. Malthus argued that the human population was fast outgrowing nature's capacity to sustain it. Malthus therefore advocated population control to ward off mass disease and starvation.

"If you can shut off the flow of fossil fuels, that will stop the engine of those industrialized nations, but people would scream immediately if that happened," explains the mild-mannered expert. "But if you could show that the by-product of the combustion of that fossil fuel, carbon dioxide, was causing runaway global warming and climate change, then you could use that for a vehicle to introduce legislation to shut down those industrialized nations."

Concisely and eruditely set out, this impressive volume details why policy makers should immediately stop funding the UN's IPCC and disband all climate -related institutions that rely on a trove of "secret science" that forms the backbone of UN IPCC alarmism.

Tim Ball explains all the steps that have led to the situation we still find ourselves in today, despite all the abject failings of all predictions and/or scenarios concocted by doom saying errant computer models. Shadowy figures behind the scenes such as billionaire Maurice Strong, are openly identified in the book and one can only hope that for their misdeeds the fraudsters will be called to account.

The undertone throughout is that sceptic scientists have long been rebuffed by the presiding UN climate cabal that refuses to enter into public debate. And it is no surprise the doomsayers are shy of open debate - much of their supposed evidence for global warming is either kept hidden or premised on the failed predictions (or, as the IPCC lamely calls them, "projections") of junk models. In fact, Dr Ball demonstrates there is no openly verifiable proof showing human-made carbon dioxide measurably altering climate, let alone "catastrophically," as is all too often claimed.

The courage and forthrightness Tim Ball has shown with this book, and in the British Columbia Supreme Court defending himself against the now failed libel suit of Michael Mann, is about to be vindicated by the judiciary. As the scientific community awaits Ball's impending legal triumph, we may edify ourselves not just with the black and white evidence presented in this extraordinary publication, but in the certain knowledge that Mann and his co-conspirators have spectacularly failed in their bid to silence dissent against their fraudulent science.

Mann's abortive attempt to sue Ball in the British Columbia Supreme Court ultimately back-fired because Mann refused to show his metadata, his calculations for his junk science, in open court. Now Mann faces possible bankruptcy on top of professional suicide, as the price for his misdeeds.

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Ned Ford

Reviewing in detail the Climategate scandal with reference to the leaked emails, Mann and his fellow scammers are now shown in Ball's book to have conspired to build the lie that the relatively miniscule human emissions of a trace and beneficial gas, carbon dioxide, will catastrophically alter the world's climate.

Ball was the underdog made into the accidental hero of the climate wars story. He helped pave the way towards a new open platform for principled scientists on the Internet so that independent, unpaid researchers debunking the so-called 'greenhouse gas theory', the cornerstone of the pseudo-science of all global warming alarmism are finally being heard. Today, more scientists are coming to the realisation that the only effect that atmospheric carbon dioxide can have is one of increased cooling - never any warming - and, at last, the journey back to empiricism is under way.

For his efforts Dr Ball will be regarded as the climatologist who was at the forefront of the paradigm shift away from the post-normalism that poisoned much government science in recent generations. Ball stood beside those who championed the traditional scientific method out to prove that an innocent - and life-giving - gas (carbon dioxide) cannot precipitate a "man-made" climate disaster. This important new book needs to be compulsory reading for all policymakers so as to bring an end to the ongoing waste of government funds tackling a non-existent threat.

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Comments

Alex Hamilton 2014-02-17 20:06

But there's no real discussion in the book of the real science is there? There is still an underlying assumption that there would be isothermal conditions in Earth's troposphere in the absence of water vapor and radiating gases.

There is absolutely no empirical evidence that increasing the percentage of water vapor above any particular location leads to warmer mean temperatures. In fact a statistically significant study has shown the opposite to be the case and dry deserts do in fact have warmer mean temperatures than rain forests at equivalent altitudes and latitudes, as intuition tells us.

From what do you suppose water vapour is raising the temperature? Are you really going to try to tell me that an isothermal troposphere (all at 255K) is a state of thermodynamic equilibrium with maximum entropy and no unbalanced energy potentials, when clearly the molecules at higher altitudes would have greater total energy because of the extra gravitational potential energy? Where Sir is your understanding of the Second Law of Thermodynamics?

The planet Uranus provides all the evidence we need that it does not require water vapour or carbon dioxide to raise temperatures at lower altitudes in a planet's troposphere. As you can read in Wikipedia (Uranus | Troposphere) that troposphere is about 320K at its base, despite a radiating temperature of less than 60K. So it's not "33 degrees of warming" out there, nearly 30 times further from the Sun: it's 250 degrees of warming due to a gravitationally-induced thermal gradient that is seen in the whole of the 350Km high troposphere. And in case you think the methane is doing the trick, it's all concentrated in the uppermost layers where it absorbs virtually all of the solar energy and radiates it back to space. There is no convincing evidence of internal energy generation, no significant energy imbalance at the top of the atmosphere, no significant direct solar radiation reaching down into the troposphere and no surface at the base of that troposphere to absorb any radiation. Yet it's hotter than Earth there.

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Jim G 2014-02-18 10:20

Alex,

Why don't you read the book before you start making assumptions yourself. I sure will.

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Alex Hamilton 2014-02-18 16:27

Jim, I have given reasons and explained what valid physics enables thinking minds to deduce about the real causes of climate change and the real (cooling) effects of water vapour and all other so-called greenhouse gases. The author and virtually all other PSU members reject the gravity hypothesis out of hand, without bothering to even discuss the physics which proves it happens.

Radiative forcing is not the mechanism which determines planetary temperatures - after all, there's hardly any direct solar radiation striking the Venus surface when it is warming by 5 degrees as "heat creep" delivers thermal energy from colder regions of the troposphere, just like it does on Earth also.

I quote from a review of the book (my bold) ...

Hi Newsel, I'll give you a couple of pokes. U.S.

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Wendy Thompson

The current "cooling trend" (or pause) is due to ...

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Newsel

Ned, Not too sure what you are alluding to with ...

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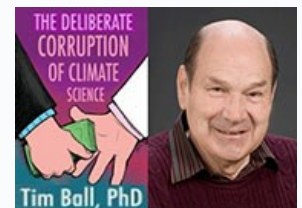


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CATASTROPHIC MAN-MADE GLOBAL WARMING: SUSTAINABLE HYPOTHESIS OR UNSUSTAINABLE HOAX?

PETER SULLIVAN

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OEDb

... in this book, you read that 'evolutionary theory is not proven law', that Darwin said 'there is no God and your grandmother is a gorilla', that 'post-modern science has become as dogmatic as the religion it replaced', that an advisor to the President believes that 'single mothers and teen mothers should have their babies seized' and that a 'transnational Planetary Regime should .. dictate the most intimate details of American's lives using an armed international police force'. None of these statements have anything to do with the climate, and the fact that the book is full of this stuff shows clearly that it isn't really about climate at all. It's just another rant.

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Jim G  2014-02-18 17:23

At least you took the time and energy to reply with some degree of intelligence on the topic. The main point Dr Ball is driving home is that there has been and still is a massive ongoing fraud encompassing the so called "climate change" sector. I personally was approached to get involved with this, and tersely turned them down. This was back in the '80's, and because I and several others wouldn't get with the "program", a large portion of our research monies vanished. Fortunately, we were able to continue using our personal funds. We "Know" what they are doing, and we're just started.

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Fritz again  2014-02-18 18:15

Alex Hamilton said "**I quote from a review of the book** (my bold) ...
... in this book, you read that Darwin said 'there is no God and your grandmother is a gorilla'.
NOTE: the reference is to a REVIEW of the book, not the book itself.

I, Fritz, agree that 'post-modern science has become as dogmatic as the religion it replaced'.
Fritz

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Alex Hamilton  2014-02-18 19:40

Jim, I am of course aware of the corruption that is going on, and, in particular, I can pinpoint where the greenhouse conjecture goes wrong: it is because it neglects the gravitationally induced thermal gradient, which is all that is needed to explain that proverbial "33 degrees of warming" and, in fact, more than that before water vapor cools it.

Only this hypothesis gels with the observed fact that water vapor cools rather than warms. Only this hypothesis gels with the observation that the Venus surface and troposphere warm by 5 degrees during the Venus day, so Venus is not just cooling off from some initial hotter state - and neither are other planets like Uranus.

Knowing what Tim Ball and most PSI members think about the gravity hypothesis, I can anticipate that whatever science is in the book is not valid in that it is based on the false paradigm of radiative forcing. When the word "science" is in the title of the book one would have hoped for better. How else can one prove that the science is in fact corrupt?

If one is just depending upon the current 30 year period of slight cooling to "prove" corruption, then all will be undone when the world warms again between 2030 and 2060.

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Jim G  2014-02-18 19:58

Alex, Let me put this to you bluntly. I have spent the last 30 years researching past climate. I earned a MS in paleoclimatology many years ago, and have kept up with all the latest and greatest tools out there to assist in my work. In order to even hope to predict future climate, one must know the past. Trust me on this (I'm sure you won't) there will NOT be any significant warming for many, many years. We are now experiencing the beginnings of a major glaciation. And I don't mean a "mini iceage". This cycle has been going on for many 100's of thousands of years....like clock-work. And nothing man can to stop it.

Enjoy the warm weather while you still can!

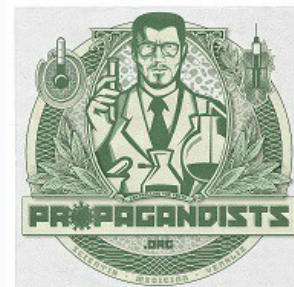
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Alex Hamilton  2014-02-18 21:50

Well then Jim G, you will no doubt be familiar with ...
Berger A, Loutre MF (2002). "Climate: An exceptionally long interglacial ahead?". Science 297 (5585): 1287-8.
doi:10.1126/science.1076120

Do you have some valid grounds for disputing their paper, or some paper of your own on this?

I take comfort in the belief that glacial periods may be regulated in roughly 100,000 year cycles corresponding with changes in Earth's eccentricity, that being affected by Jupiter, but being currently about half way between the



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extremes. In any event, the most recent glacial periods during the current glacial age have been reasonably localised in the Northern Hemisphere, so I guess some of the world's population could move a little south.

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Greg House 🗨️ 2014-02-18 23:57

Quoting Alex Hamilton:

I can pinpoint where the greenhouse conjecture goes wrong: it is because it neglects the gravitationally induced thermal gradient, which is all that is needed to explain that proverbial "33 degrees of warming"

There is no "33 degrees of warming". It is a fiction resulted from a wrong application of the SB equation. We had a nice discussion on that on the thread "By Definition, Aren't All Gases 'Greenhouse Gases'?" starting with #25.

This automatically refutes this "gravitationally induced thermal gradient" thing.

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Pat Obar 🗨️ 2014-02-19 01:36

Quoting Greg House:

Quoting Alex Hamilton:

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This automatically refutes this "gravitationally induced thermal gradient" thing.

Greg,

Please. be more careful There is all kinds of evidence that a large gravitational potential creates and maintains a large temperature gradient in this atmosphere. No one knows why this is? but has been carefully measured in this atmosphere. There is no physical law that prevents the establishment and maintenance of a temperature gradient in this atmosphere, with no thermodynamic process. The gradients that would demand a transfer or movement of energy is not. the gradient temperature potential, It or may completely cancelled by the opposing gravitational gradient. from those that considered "lots" the lapse rate is adiabatic. Not just. horizontally but also vertically. There is no heat flux in any direction that has been discovered, The gravitational potential is never sufficient to allow the spontaneous transfer of heat energy "to a higher temperature"! This is all considered in "the" lapse rate. With no flux, no work no change in entropy. This adiabatic+ is also isentropic .

Consider that the lapse rate may be only a thermostatic condition, with no need for any dynamic! I hope this truly bends the mind of all readers..

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Alex Hamilton 🗨️ 2014-02-19 01:52

Greg's comment #25 referred to above was such a load of guesswork that I considered it did not warrant a reply.

A blackbody (or grey body) by definition only absorbs and emits energy by radiation, not by conduction and

evaporative cooling, as does the Earth's surface. The Stefan-Boltzmann equation only applies to black and grey bodies, not to bodies like the Earth's surface which do not meet the definition of a black or grey body.

I have proved that the thermal gradient evolves spontaneously and I have used the laws of physics to do so. If you think you can prove me wrong, then find fault in my reasoning. Then you may wish to try to explain in some other way how the required energy gets into the surface of Venus to actually raise its temperature by about 5 degrees.

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Greg House 🗨️ 2014-02-19 02:04

Quoting Alex Hamilton:

Greg's comment #25 referred to above was such a load of guesswork that I considered it did not warrant a reply.

Doug, it was not guesswork, it was a clear demonstration of why the SB equation was not applicable to the case in question. The "33°C additional temperature" does not exist and this alone refutes the fiction you have been promoting so obsessively.

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Pat Obar 🗨️ 2014-02-19 02:30

Quoting Jim G:

Alex, Let me put this to you bluntly. I have spent the last 30 years researching past climate. I earned a MS in paleoclimatology many years ago, and have kept up with all the latest and greatest tools out there to assist in my work. In order to even hope to predict future climate, one must know the past. Trust me on this (I'm sure you won't) there will NOT be any significant warming for many, many years. We are now experiencing the beginnings of a major glaciation. And I don't mean a "mini iceage". This cycle has been going on for many 100's of thousands of years....like clock-work. And nothing man can to stop it.

Enjoy the warm weather while you still can!

The cold will affect you but never the rich brokers. They will live in caves heated by the rapid oxidation of coal. You will freeze!

To counter such, please locate each pitchfork and torch you can find. Even the higherd troups All will be required to survive.

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Alex Hamilton 🗨️ 2014-02-19 07:37

Yes, Greg. SB calculations cannot be used at all for the internal interface at Earth's surface because it is not a gray body by definition.

Run off and see how you get along with explaining why the Venus surface rises in temperature by 5 degrees (from 723K to 737K) over the course of its 4-month-long day. How does the required energy get into the surface when only about 20W/m² of direct Solar radiation reaches the surface?

Then explain why the base of the Uranus nominal troposphere is hotter than Earth, even though there is no significant loss of energy from the planet and no direct solar radiation reaching down there, and no surface.

Then explain why the core of the Moon is far hotter than the surface ever is.

When you get through these questions I'll set some more. You'll learn by thinking about these issues. But until you can answer these questions, you have no valid understanding of the same physics which also determines Earth's climate.

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Greg House 2014-02-19 09:58

Quoting Alex Hamilton:

Then explain why the base of the Uranus ...

Doug, $2 \times 2 = 5$ is wrong on Earth, as you possibly know, can you please explain why it is correct on the Uranus?

The same goes for your gravity thing. It seems to have started as an explanation of the "additional 33°C temperature", but now you know there is no "additional 33°C temperature" on Earth. Hence there is no gravity thing inducing it. You can not overcome this.

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Lonny Eachus 2014-02-19 13:19

Alex:

I'm willing to listen, but on the face of it a "potential energy" argument seems to violate conservation of energy.

A warm gas expands as it rises, resulting in any given volume of gas already having less energy (although admittedly, the same mass should have the same energy if we assume it hasn't gradually bled off during the rise to higher altitude).

So where does the potential energy come in? Rising gas displaces a like mass of sinking gas, so the net potential energy doesn't change. I don't see any mechanism whereby a rising gas "transfers" its energy into potential energy.

If you can explain this, or point me to somewhere I can read about it, I would appreciate it. Thanks.

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Alex Hamilton 2014-02-19 20:44

I am not presenting an argument which in any way violates conservation of energy. I do know my physics and, more importantly, understand it better than it appears you do.

I am not interested in discussing large masses of gas rising or falling. Everything happens at the molecular level as individual molecules swap kinetic energy and gravitational potential energy when there is any vertical component in their free path motion between collisions. Whether or not you can actually measure air moving very slowly up or down is just a matter of degree - that is, the relative proportion of such molecules moving one way or the other. In general, if there is excessive absorption of new energy you may be able to detect air movement. It is a disturbance of thermodynamic equilibrium which drives this process, because extra (newly-absorbed) thermal energy will spread out in all accessible directions away from its source in the process of restoring the autonomous thermal gradient associated with thermodynamic equilibrium.

Now if you don't understand how, when an apple falls off a tree, some gravitational potential energy is converted to kinetic energy then I suggest you go back to basic physics texts and find out what Newton had to say about it.

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Tim Folkerts 2014-02-19 22:40

Alex says: *"Everything happens at the molecular level as individual molecules swap kinetic energy and gravitational potential energy when there is any vertical component in their free path motion between collisions."*

If you are willing to be open minded, consider the simplest situation -- a single molecule in the atmosphere interacting with a planetary surface @ a fixed temperature (the extreme version of your "individual molecules between collisions").

That molecule will collide with the surface and leave with some random amount of energy consistent with the Maxwell-Boltzmann distribution. Sometimes it will be moving fast; sometimes it will be moving slow. If we measure the distribution at the surface level many times, we will find that MB distribution.

What if we measure the distribution 10 m up? Well, the molecules that were going slowly will never make it that high, so we will only be looking at the molecules that we going especially fast to begin with. We will have to wait longer to get a good set of measurements; but (with a bit of math) it can be shown that the distribution will STILL be the same M-B distribution corresponding to the SAME temperature.

The same story if you look 100 m up. or 1000 m up. There are fewer and fewer trips where the molecule makes it that high, but amazingly the average energy (and hence temperature) will still be the same. Don't take my word for

it -- do the calculations. (But please don't appeal to your own authority to dismiss all who disagree with you.)

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Alex Hamilton 🗨️ 2014-02-20 00:37

The calculations are simple. As any object, including a molecule, rises or falls the sum of kinetic energy and gravitational potential energy remains constant because energy cannot be created or destroyed. So ..

$$PE = -KE$$

$$M.g.H = - M.Cp.T$$

$$\text{gradient} = T/H = -g/Cp$$

As a molecule rises it has to lose kinetic energy, and extremely few molecules would rise that far anyway. That's not how it works. Energy is passed on in collisions and individual molecules rarely go that far in their random walk, unless perhaps a strong upward wind blows them up a steep cliff, but that's irrelevant. When they collide they share the available kinetic energy that each has - it is not a random process - the one with more energy always loses some and the other gains. Have you never played snooker?

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Alex Hamilton 🗨️ 2014-02-20 00:40

In any event, you have not explained how the required thermal energy gets from the colder Venus atmosphere into its surface in order to raise the temperature by 5 degrees during its day. You can only explain this if you start with accepting that the gravitationally induced thermal gradient is in fact the state of maximum entropy and is thus isentropic with an inevitable thermal gradient.

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visiting physicist 🗨️ 2014-02-20 04:26

Of course the "science" is corrupt If you want to understand why it's not carbon dioxide after all, consider the following ...

The evidence on Uranus proves there is a gravitationally induced temperature gradient.

"The energy balance of Uranus is therefore $E = 1.06 \pm 0.08$;" [1]

The above is a percentage of about 3.7 W/m² of incident solar radiation at Uranus TOA. [2]

So energy imbalance on Uranus is a mere 0.04W/m²

That's quite a small amount, so if you think the 5,000K core is still cooling then I would expect far more imbalance than that.

But it isn't still cooling and it won't cool significantly in a billion years unless the Sun also cools significantly.

So how is the thermal gradient maintained (very close to the -g/Cp value) when no significant direct solar radiation gets down below the absorbing methane layer near TOA and the mostly hydrogen and helium atmosphere extends for thousands of kilometres above the small solid core that is about 55% the mass of Earth?

This is highly relevant to what happens on Earth, because physics is universal and we do in fact have a thermal profile that supports our surface temperatures also.

[1] www.sciencedirect.com/science/article/pii/S0019103590901553 ☞

[2] nssdc.gsfc.nasa.gov/planetary/factsheet/uranusfact.html ☞

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visiting physicist 🗨️ 2014-02-20 05:58

Sorry - I should correct that reference to 1.06 ± 0.08 . It is the ratio of emitted to absorbed flux for Uranus, but note that it could be less than 1.0, with more absorption. Neither does it necessarily have to reflect what is coming from the core, because it could be due to a small compression of the atmosphere.

Note this statement ...

'The temperature of Uranus' atmosphere is consistent with heating only by absorbed sunlight' [3]

[3] Fix, J.D., Astronomy: Journey to the Cosmic Frontier, WCB/McGraw-Hill, New York, p. 286, 1999.

Pat Obar 2014-02-20 10:26

Quoting Lonny Eachus:

Alex:

I'm willing to listen, but on the face of it a "potential energy" argument seems to violate conservation of energy.

A warm gas expands as it rises, resulting in any given volume of gas already having less energy (although admittedly, the same mass should have the same energy if we assume it hasn't gradually bled off during the rise to higher altitude).

So where does the potential energy come in? Rising gas displaces a like mass of sinking gas, so the net potential energy doesn't change. I don't see any mechanism whereby a rising gas "transfers" its energy into potential energy.

If you can explain this, or point me to somewhere I can read about it, I would appreciate it. Thanks.

lonny,
nd

I can only offer some thoughts and point you to the work of John Poynting who translated Maxwell's equations from the original quaternions to vector arithmetic consisting of one length potential and two orthogonal Euler angles or another single vector solid angle in the same direction as the length potential.

This geometry is quite useful when considering an omnidirectional or isotropic field like a point source gravitational field or the electromagnetic field from a sphere. The change from Cartesian coordinates into two co-aligned vectors turns many distance dependent variables into constants.

Please try to set up a consistent geometry and static potentials or potential differences with fields gravitational, pressure, temperature difference, or radiative potential difference, before trying any dynamics or fluxes. I must always do so or end up travelling the same dirt road leading to the same swamp! Please ask more good questions. Alex Hamilton, AKA visiting physicist, AKA Doug Cotton, stays in that swamp pedalling his comic book! His PE = -KE, is a bastardization

of Rudy Clausius' Virial Theorem, that applies in the stratosphere, to the troposphere, where it never applies.

Stratosphere molecules are mostly constrained only by gravity rather than by a pressure wall or other nearby gas molecules (pressure) in six more dimensions.

Three linear, and three rotational, or five Euler angles and one mean free path. In the stratospheric molecule's orbit, few are on a ban intercept course with another molecule. The mean free path is the orbital distance to the tropopause where these molecules transfer all potential and kinetic energy to colder molecules, establishing the lowest thermometric temperature in near space!

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Alex Hamilton 2014-02-20 20:18

Maxwell was not right in everything. It was a great disservice to mankind that he dismissed the brilliant hypothesis of Josef Loschmidt that a thermal gradient would evolve in a vertical plane in any solid, liquid or gas subjected to a gravitational field.

I say that because, had it been more widely understood and acknowledged in the 20th century, anyone could have seen that it is the reason for that "33 degrees of warming" of Earth's surface, and there is no need to postulate a greenhouse effect with (mostly) water vapor raising the surface temperature. In fact it does the opposite, but nobody bothered to carry out a study (as will be published in April this year) to prove that water vapor cools.

So yes, Maxwell's equations can indeed be used to deduce there "should" be isothermal conditions in a troposphere, but the reality is that there are not such conditions, even in the nominal troposphere of Uranus. Try using his equations to show why, and you will fail dismally.

And when are you going to explain how the extra energy gets into the Venus surface to raise its temperature by 5 degrees during the 4-month-long day? No one else has been able to do so here, except you-know-who.

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Alex Hamilton  2014-02-20 20:26

Pat Obar and others

It's a pity you missed reading (or did not take the time to understand) the PROM paper on planetary core and surface temperatures. PSI is now prohibited from publishing that paper, and so now you'll only find the information in the book "*Why it's not carbon dioxide after all*" due on Amazon in April.

It does not take rising air for gravity to set up the observed thermal gradient in Earth's outer crust which is just as we can calculate from the force of gravity and the specific heat.

When are you going to attempt to answer the Venus question that no one else can?

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Alex Hamilton  2014-02-20 20:40

Quoting from above ...

"The mean free path is the orbital distance to the tropopause where these molecules transfer all potential and kinetic energy to colder molecules,"

If you mean gravitational potential energy you are incorrect in implying that such energy is transferred in molecular collisions. In contrast, kinetic energy is shared during collisions and after the collision KE is more equally distributed between the molecules involved, and of course gets evenly distributed between their DoF.

I don't know why you are even discussing the stratosphere, because the diffusion process that sets up the thermal gradient in the troposphere obviously does not work efficiently in the stratosphere where the rate of absorption of new energy dominates, as it does in ocean thermoclines.

So what point are you making in your somewhat vague post? And when are you going to attempt to answer the question about Venus.

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Alex Hamilton  2014-02-20 20:51

Pat

Regarding your claim that the tropopause has "the lowest thermometric temperature in near space" I believe you will find that the mesopause is usually colder. If you consider the stratosphere and mesosphere as one, then it is just a bit of a hump in a continuing downward trend. Energy absorbed in that "hump" spreads both upwards and downwards, mostly away from the peak temperature. The mesopause is the coldest layer. Of course the thermosphere above that is very hot because of solar absorption, but its total mass is insignificant and we probably should consider the mesopause as the real top of atmosphere.

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Alex Hamilton  2014-02-20 22:39

To all:

It might be best if you read my comments on [this newer thread](#), because I'm not returning to this old thread.

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Brian Daed  2014-02-23 15:54

A major mistake is to equate temperature with energy. They are like apples and oranges. They represent different conditions in an energy equation.

The surface of the Earth receives an estimated 87 mw/m² of core energy, most of which is a continuous flow from Uranium and Thorium decay. Since the lithosphere is my definition solid and opaque, the only means of energy transference is conduction. At an estimated 410 km the required temperature is high enough to melt rock, which then also allows for convection. This is a temperature of around 1900 K.

Now if we postulate an opaque atmosphere with no convection, (not very likely), for separating out an ideal element, then the temperature at the surface of Earth rises to around 1,200 C, and the thickness of the lithosphere is reduced to almost nothing. Obviously this is not the case as the plastic in this computer would be vaporized by such temperatures.

However the Earth revolves and is capable of losing energy by both radiation and convection.

Quite obviously the point is to not confuse temperature with energy. On a hot day a high pressure bike pump can burn a hand with a potential temperature of up to 2,000 C. This is the value for a racing bike.

Back to the Earth. If the Sun is added in to a complex equation of convection and radiation out, the net is the balance of what we see today. The top of the mesopause then represents the true blackbody radiation temperature.

Now the Arctic an Antarctic temperatures are always in a borderline situation. A slight increase in radiation will

cause the ice to melt, indeed one such meltdown has already occurred. As the ice melts the temperature will actually get colder until the ice is gone with a -30 C potential. Once again temperature and radiation cannot not be directly compared. Thus you have an increase in sea ice.

By the Milankovitch cycles we should realistically expect two more melt downs. Greenland and Antarctica. Such a meltdown should only occur once every 400,000 years or so. The last time was 400,000 years ago or so. However, it will not be like in the movies. It will take milenia.

In the case of Venus with an extreme atmosphere and little to no rotation the temperature would indeed be much higher at the surface than at the top of the atmosphere.

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Alex Hamilton  2014-02-24 07:04

Brian

Temperature is a measure of the mean kinetic energy of the molecules in the ensemble. That's no mistake. You need additional energy to increase the kinetic energy in the translational, rotational and vibrational degrees of freedom.

The surface of the Earth receives a lot of energy from the Sun - hadn't you noticed? We don't know whether or not there is an outward energy flow from the outer crust, because the temperature gradient matches the thermodynamic equilibrium gradient that we can calculate ought to be observed.

Please clarify the composition of your "opaque atmosphere" which would seem to have to be solid. The more moisture there is, the less effective is any insulation, as we know from double glazed windows.

No the mesopause is about 180K and that is certainly not the radiating temperature, and never could be unless the Sun fades away quite a bit.

In general, solar radiation just reflects off polar ice because of the acute angle at which it strikes it for only half the year anyway. Ice melts from below usually, and some melts due to the flow of water underneath, or from the release of sub-terrestrial thermal energy such as from underground volcanoes. Maybe you like to plug these somehow?

Actually the eccentricity of the Earth has a cyclic pattern (due to Jupiter's gravity) and this 100,000 year cycle probably regulates glacial periods within the current glacial age.

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Yelder Retep  2014-02-25 07:38

Alex Hamilton said in his comment of 17th Feb. " .. But there's no real discussion in the book of the real science is there .. ".

It was the same in his contribution to that cobbled collection of blog articles "Slaying the Sky Dragon .. " (also published by Ken Coffman's Stairways Press).

Perhaps Ken is finding it really hard to attract authors.

You can find the reaction of Dr. Mann's lawyers to this latest piece of nonsense on Mann's blog at www.facebook.com/MichaelMannScientist/posts/662080770514795

Taking into consideration the review comment that " .. Ball correctly adjudged that Mann (and others) should be in "the state pen, not Penn. State." maybe the "John Doe" in Mann v Ball will be replaced by a couple of names

ENJOY

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Matt  2014-02-28 12:33

How about we just reduce mass CO2 emissions to not completely fuck the aquatic ecosystem ?

We removed far too many natural carbon sinks (jungles/forests) so it's a double whammy. Ocean's been saving us from crazy CO2 atmosphere levels, but that equilibrium will break

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Lonny Eachus  2014-03-03 13:16

Quoting Alex Hamilton #19:

The calculations are simple. As any object, including a molecule, rises or falls the

sum of kinetic energy and gravitational potential energy remains constant because energy cannot be created or destroyed. So ..

$$PE = -KE$$

$$M.g.H = - M.Cp.T$$

$$\text{gradient} = T/H = -g/Cp$$

As a molecule rises it has to lose kinetic energy, and extremely few molecules would rise that far anyway.

But Alex, you still haven't answered my question. You commented about it, but you didn't really answer it.

Whenever a molecule "rises up" by any significant amount due to kinetic energy, it would displace another molecule which has less kinetic energy that is "sinking down" due to the very same effect. The net effect *en masse*, as I mentioned before, would still be zero.

You can't have it both ways. Even at a molecular level, if some molecules are rising, others are sinking. Your net is still zero.

I do not see how you could reach any other conclusion. Even if your math is correct, then it is correct in the other direction as well... if it were not, then as I mentioned before it would violate conservation of energy.

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Lonny Eachus  2014-03-03 13:51

Quoting Alex Hamilton:

Maxwell was not right in everything. It was a great disservice to mankind that he dismissed the brilliant hypothesis of Josef Loschmidt that a thermal gradient would evolve in a vertical plane in any solid, liquid or gas subjected to a gravitational field.

...

To be clear about my earlier comment: If what you actually meant was that a thermal gradient could develop due to gravity (as opposed to an actual "warming" effect which is what you appeared to be implying), then it should be easy to verify by experiment.

Simply create a large vertical object (a plate, say) of homogeneous composition, say 30 meters tall or so. Enclose it in a uniform shell that is opaque to significant radiation. Keep the shell at a uniform temperature, and evacuate it, to prevent radiative differences and convection. After a time, measure the temperature at the bottom and the top of the plate.

If the shell is kept at uniform temperature, then any gravitational gradient should be measurable. Surely, if the atmospheric gradient is 33 degrees, modern instruments could measure 30 m tall plate accurately enough to see a difference if it exists.

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Guest  2014-03-06 12:15

This comment has been deleted by Administrator

jonnyDoe  2014-04-02 18:55

Quoting Pat Obar:

Consider that the lapse rate may be only a thermostatic condition, with no need for any dynamic! I hope this truly bends the mind of all readers..

isn't the lapse rate dynamic and changing with the weather patterns?
I deal with this all the time at work re/thunderstorms and stratus clouds

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MikeH 2014-04-06 12:15

I doubt I ever visited a site with blog postings as civil and gentlemanly as this one. Could not read through all but read quite a bit. It certainly added to my knowledge base as to the scientific analysis involved.

But to most folks, this information is unusable, and that is too bad. Can I ask some basic questions, questions asked and answered in grammar school. (1a) What is the planet made up of? I believe the answer is 70% water (no human activity). Of the 30% remaining land mass, how much is occupied by humans? ANS: 5%. Why then should I believe that such a small % of human activity can cause "global warming"? It will never make sense to me.

(2) What is the normal temperature supposed to be? ANS: no one knows, but there's a lot of guesswork going on to get grant money.

(3) It seems to me that its the Sun's activity that has the most impact, if not all, on the planet. The Sun is in a constant state of change, those changes affect our climate. Just as half the planet gets cooler at night, change of seasons etc.

(4) Its all about money and control and how it corrupts weak minded people who are easily corrupted.

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CamG 2014-09-26 04:39

Sorry. I am an idiot. Three quarters of the Earth is water. Water cools the temperature by absorbing the heat and causing evaporation. Warmer weather: more water vapor. More solar activity: even more warming, even more water vapor. Night cooling, seasons change, solar activity drops: water condenses and releases heat into the atmosphere. Does that not help to balance temperature on the short term basis? Comparison: A desert has no water, so days are boiling and nights freezing. How much water vapor escapes to space??? None? CO2 is about .04 of 1% of the atmosphere, isn't it? How can CO2 begin to compare with water vapor? Solar activity remains the main source of our heat, and therefore makes the long term decisions on climatic temperatures? We need to simplify the truth so that even kids can understand it. Me Too! The only thing kids get in North American schools is a lasting Environmental and Cultural guilt complex! Suzuki was allowed to take his religion/cult into those schools, and now it pervades and prevails at all Academic levels. Most Academics: "Practically" Idiots. We need to get the message where it is needed. Kids are not stupid, and need to be given half a chance, before it's too late! We need to write kids books about climate; basic economics; trees(which are neutral to negative in "greenhouse" gases when you factor in decay and methane); And the fact that nature looks different when food and shelter are not available. Suzuki conveniently left those messages off his lectures. How about eco tours that involve 3 day fasts? Sadly, some adults are not competent, are under stress, or think only of themselves. That is why groups like the IPCC can use attention, money, and power to "convert" them to the "RIGHT THINKING" side of the equation. We need to get kids involved and teach them some "critical thinking" tools. Maybe small to large bursaries could be put out to all levels of students: to contrast the two sides of the "debate" and do the research to argue both sides of it. One must be careful with the internet, because the IPCC seems to have done it's best to create "the misinformation age."

I am sorry for the misinformed "enviros" who are just hoping for a better world. Learn to think, and make informed choices instead of Emotional ones, and it will be. The Envirocrats and Scienocrats should be the bad guys in a space game!

From One of The Uninformed,

Thank you Tim Ball!!!!

cam

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Ray 2015-01-14 23:00

Alex Hamilton

Are you certain you cant describe it as compressed gas ?

Compress gas in a compressor it gets hot, this heat isnt due to friction ...


Let the gas in the tank cool, and it will come out starved for heat ... this change in temp is solely a function of its pressure

In other words, take a cube of air, compress it, its measurable temp increases, take the same cube and expand it 2x in volume above ambient, its measurable temp decreases.

All 3 states of compression contains the same amount of energy as heat, only the density has changed.

Perhaps this explains your gravitationally created temp gradient more easily.

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Ray  2015-01-14 23:25

Ohh,, but also notice i ignore any notion of kinetic or potential et al that has anything to do with it

And yet it does describe, that all things being equal, there will be a temp gradient in the air column due to the gravitational compression, the gas at the bottom compresses by the mass of the gas above it, and if the heat content by weight was identical top to bottom,, there would be an increasing temp as your measurement point went to the bottom.

So a gas giant even with less energy as heat, contained per unit of weight, could have a far greater measured temp due to the higher gas pressure.

Alex is correct this can explain Venus, where ground level pressures are such that a compressed gas cylinder would float before it reached the ground if it was not crushed

And it can explain the Gas giants like Uranus
Quite a simple concept really

Lonny

I doubt that would work unless your container was a mile tall. its one of the reasons its cooler on tall mountains, as the pressure decreases, energy content by weight being equal, the temp decreases.

if you had a perfectly insulated and IR reflective airbag and filled it with air on top of the mountain,, If the air in the container was the same as the mountain top , , , and you drove down the mountain with it . its temp would increase with the air pressure and theoretically match the higher temp at the base of the mountain once it arrived there.

Theres your temp gradient.

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