ARCTIC WARMING IS NOT GREENHOUSE WARMING

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ABSTRACT

After two thousand years of slow cooling Arctic, warming suddenly began more than a century ago. It has continued, with a break in the middle, until this day. The rapid start of this warming rules out the greenhouse effect as its cause. Apparently the time scale of the accumulation of CO₂ in the air and the Arctic warming does not match. It is likely that the cause of this warming was a relatively sudden rearrangement of the North Atlantic current system at the turn of the century that directed warm currents into the Arctic Ocean. All observations of Arctic warming can be accounted for as consequences of these flows of warm water to the Arctic. This explains why all attempts to model Arctic warming have failed: models set up for greenhouse warming are the wrong models for non-greenhouse warming. It turns out that satellites which have been measuring global temperature for the last 31 years cannot see any sign of current warming that supposedly started in the late seventies. This absence of warming in the satellite record is in accord with the observations of Ferenc Miskolczi on IR absorption by the atmosphere. What warming satellites do see is only a short spurt that began with the super El Nino of 1998, raised global temperature by a third of a degree in four years, and then stopped. It was of oceanic origin.

INTRODUCTION

The Arctic is warming. There are numerous observations of this warming, but the most direct are those by Spielhagen et al. [1] that came out this January. They report that the Atlantic Water temperature reaching the Arctic now exceeds anything seen within the last 2000 years [1]. A lesser amount of warm water also reaches the Arctic via the Bering Strait. Thanks to poleward winds an unusual amount of warm water entered in 2007 and melted a large batch of sea ice to the north while the Russian side remained undisturbed. Since satellites began observing it in 1979 they have seen a steady reduction of Arctic summer ice. Kwock and Untersteiner [14] report that during the last thirty years this decline in ice cover occurred at an astonishing rate of 11 percent per decade. The fact that the Northwest Passage and the northern route from the Russian Arctic to the Bering Strait area have both become navigable is likewise a symptom of Arctic warming. This warming is both recent and faster than model makers have predicted from greenhouse theory. Climate models use as input the yearly increase of

atmospheric carbon dioxide reported by the Mauna Loa observatory in Hawaii. This allows them to calculate the temperature increment caused by the greenhouse effect of carbon dioxide added to the atmosphere. It is known that water vapor is also a greenhouse gas that must be accounted for. Warm air can hold more water vapor than cool air does. When carbon dioxide warms the air by the greenhouse effect this also brings more water vapor into the air by evaporation. As a result the extra greenhouse effect from this evaporated water will supplement the greenhouse effect from carbon dioxide that caused the original warming. According to theory it is their combined greenhouse effect that we notice. Greenhouse effect from carbon dioxide that started the warming is called a forcing and that from the associated increase of water vapor is called a feedback. It turns out that when these models take latitude into account they predict that polar latitudes would likely warm faster than the rest of the globe does. But the observed warming was even faster than that so something else is needed to explain it. Hence the concept of Arctic amplification. As the story goes, the snow and ice in the Arctic have high albedo that reflects incident sunlight back into space. But once the snow has melted the darker substrate will start to strongly absorb the sunlight and thereby speed up warming. It was an attractive theory and Polyakov [7] decided to observationally check it out. But he could not find any physical examples and came back empty-handed. Next Kaufman et al. [3] decided to take an in-depth look at Arctic temperature history. In the Arctic borderlands there are many small lakes whose annual freezing and thawing has produced layered sediments that preserve a datable temperature history. With the help of a group of volunteers, the Arctic 2K Project members, they produced a 2000 year temperature history based on these lake sediments [Figure 1]. The most important fact it shows is that the present Arctic warming started suddenly at the turn of the twentieth century. There was nothing before it except for a slow, linear, two thousand year old cooling trend. They correctly attribute this cooling to a steady, orbitally-driven reduction in summer insolation.

Figure 1. Two thousand years of Arctic temperature history, by Kaufman et al. [3]

The warming starts very suddenly, takes a break in mid-century, and then becomes the present day Arctic warming that is still going on. And all this correlates well with

other historical observations. Thus, early twentieth century Arctic warming is described by Ian Plimer [6]. According to him there were two noticeable periods of warming, 1920-1930 and 1975-2000. Bengtsson et al. [8] note that the Arctic warming temperature anomaly from 1930-1940 amounted to +1.7 degrees Celsius. According to the authors this was followed by cooling and then a new warming set in which reached the level of the 1940s by 2003. By now it should have overshoot the previous record. This two-part warming with a break in the middle is also reflected in Kaufman's temperature curve. It, too, shows the most rapid rise in recent times. According to Plimer, prior to 1930 many parts of the Arctic were closed to ships, even icebreakers. By contrast, in the thirties the North Sea Route, around Spitsbergen, had opened up. The Arctic was then warmer than today and ships that were not icebreakers could reach past Spitsbergen, to the Russian Arctic ports and Novaya Zemlya, and circumnavigate Franz Joseph Land which is halfway between Siberia and the pole. And this route stayed open through World War II when US ships were able to deliver Lend-Lease supplies to Soviet Arctic ports.

While the last part of Kaufman's curve is highly compressed due to the scale they use Figure 2 which is based on *NOAA Arctic Report Card for 2010* shows the critical temperature region in greater detail.

Figure 2. This SAT anomalies chart for the Arctic expands the rising part of Figure 1. It covers latitudes 60-90° North [14]. The two-part nature of the warming is clearly visible. The warming pause is actually a thirty year cooling period.

DISCUSSION

Climate models such as the ones that can't predict Arctic warming correctly have been unable to predict global temperatures in general. An example is the IPCC Fourth Assessment Report (AR4) according to which global temperature in the twenty-first century should rise at the rate of 0.2 degrees per decade. For the first decade of this century there was no such warming. This absence of warming in the satellite record is in accord with the work of Ferenc Miskolczi [11, 12, 13] who found that the transparency of the atmosphere in the IR where carbon dioxide absorbs had not changed for 61 years. This constancy of IR absorption persisted in the face of substantial additions of CO₂ to the atmosphere. It tells us that there is no enhanced greenhouse effect and that is why satellites cannot see any warming. The absence of this greenhouse effect also makes attempts to mitigate it futile and mitigation costs a colossal waste. Returning to Arctic warming, let's see what Kaufman et al. themselves think of their warming. "An Arctic summer temperature of -5 degrees Celsius ... might have been expected by mid-twentieth century ... instead our reconstruction indicates that temperatures increased to +0.2 degrees Celsius by 1950. This shift correlates with the rise in global average temperature which coincided with the onset of global anthropogenic changes in global atmospheric composition ..." And again: "...warming in the Arctic was enhanced relative to global average, likely reflecting a combination of natural variability and positive feedbacks that amplified the radiative forcing." A wonderful concatenation of global warming mantras, all wrong. Polyakov [7], as we saw, had already looked for that amplification they cite and could not find any physical signs of it. And temperature curves from both NOAA and the Hadley Centre (HadCRUT3) show that the start of the twentieth century was followed by a ten year cooling trend, not by any rise of global average temperature which came later. Bengtsson et al. [8] also note that anthropogenic forcing in the early part of the century was unlikely since the greenhouse gas forcings at the time amounted to only twenty percent of those in the present day. And Trenberth et al. [9] show that carbon dioxide took no notice of the arrival of a new century. This fact alone tells us that it is impossible for carbon dioxide to have had anything to do with that warming. Kaufman et al. were simply wrong. If you want more absorption so as to produce warming the laws of physics dictate that you must put more gas in the air and this certainly did not happen. For us the hard fact is now that for unknown reasons Arctic warming had an abrupt beginning at the start of the twentieth century and continues, after a pause, to this day. And a sudden beginning requires an equally sudden cause. This means that we will have to find a heat source that can act suddenly and massively and influence Arctic temperatures over a wide geographic area. And at the same time it must be capable of retracting for significant intervals of time as happened after the thirties. This rules out the sun, carbon dioxide, and volcanoes as unlikely causes but what's left? It's actually simple: it must be ocean currents. A major rearrangement of the North Atlantic current system at the turn of the twentieth century is the only possible event that could have started the warming. Since Arctic warming has thereby lost its status as a showcase for greenhouse warming we have to take a hard look at other proofs of warming.

CONFIRMATION OF THEORY

We already know that the Gulf Stream, in the guise of the East Spitsbergen current, delivers huge amounts of warm water to the Arctic and keeps the Russian Arctic ports ice free in the summer. But what do we know of its history? Currents are driven by winds and if there was a rearrangement of currents someone should have noticed a concurrent change in prevailing winds. And this is exactly what Bengtsson et al. [8] do report. They find that early twentieth century Arctic warming was accompanied by increasing westerly winds between Spitsbergen and the northernmost Norwegian coast. And Birkeland [10] likewise reported that even though ice was constantly added to the Greenland Sea by freezing in the late twenties it melted due to the increased speed and temperature of the Norway and Spitsbergen currents, and an increased wind velocity. But the main actor in Arctic warming surely must be the Gulf Stream itself. It is likely that it assumed its northerly course only at the turn of the twentieth century. And the midcentury pause in warming happened because its original flow pattern temporarily returned. This interruption of warming can be clearly seen in Figure 2 which shows two warming periods separated by a cooling phase. The observation is also important because what has happened before can happen again if the currents and the winds should so decide. We can now put all these disparate pieces of evidence together. First and foremost, the sudden start of warming that Kaufman et al. discovered cannot be caused by the greenhouse effect because the laws of physics do not permit this. But is it still possible that the greenhouse effect may have kicked in at a later date? To resolve this question let's look at Figure 2 again. It is taken from the *NOAA Arctic Report Card for 2010* and expands the right side of the Kaufman temperature curve. We see that the mid-century pause in warming was not just a pause in warming but an actual cooling that lasted from 1940 to 1970. The rate of cooling was 0.3 degrees per decade while the two warming periods flanking it showed warming by 0.44 degrees per decade and 0.5 degrees per decade, respectively. It is easy to see how the changing course of currents can cause such variability but it is impossible for the greenhouse effect to act in like manner. This rules out the greenhouse effect from the beginning until 1970. But should you then suggest that greenhouse warming still could have started in 1970 and continued until this day you would have two problems to overcome. The first is the same one as the original start of the warming problem: this secondary warming also starts very suddenly and therefore the greenhouse effect is precluded by the laws of physics. The second problem is direct observations by Spielhagen et al. [1]. They believe that northward-flowing Atlantic water is the major means of heat advection toward the Arctic today. To them it follows from the copious flow of warm water to the Arctic. And this is precisely what I had previously predicted [2] from the work of Kaufman et al. [3]. While the Kaufman data were based on sediment cores from Arctic lakes Spielhagen et al. went on a scientific cruise to the Arctic Ocean and measured water temperatures directly. They also took a foraminiferal core near Svalbard and determined temperature history from that. They found that water temperature had followed an essentially similar path to what Kaufman had reported in 2009. What is new is a direct confirmation of copious present day flow of warm Atlantic water into the Arctic. They find that the "...temperature mean of the modern period exceeds all individual values

from the preceding 2000 years... The modern warm Atlantic Water inflow ... is anomalous and unique in the past 2000 years and not just the latest in a series of natural multidecadal oscillations.” But they still haven’t given up on Arctic amplification, a form of accelerated greenhouse effect. They cite Screen & Simmonds for that [4, 5] who think that Arctic amplification is caused by loss of sea ice cover. *Nature* had promoted that paper with a press release when it first came out. But if there is no sign of greenhouse warming in the Arctic where then does that carbon dioxide which is supposed to be warming up the world fit in? In Laplace’s words to Napoleon, “I have had no need of that hypothesis.” But there is one more thing. With Arctic warming locked in for an unknowable period someone is bound to ask what happens to the poor polar bears. First, the Arctic has been as warm or warmer before and they survived. Second, there is additional hope for them from a new theory of Arctic cooling suggested by Nils-Axel Mörner [24]. He points out that the solar cycle now starting is similar to the ones that were responsible for the Little Ice Age. Such solar minima are accompanied by an increase of the intensity of solar wind impinging upon the atmosphere and this has a domino effect by changing the angular momentum of the earth. It will directly change the rotation of the earth and length of day (LOD) with it. Change of momentum can also influence the path of ocean currents, more specifically the Gulf Stream. The present path of the Gulf Stream through the North Atlantic branches out to the North Sea and to the Arctic Ocean. According to him the change in angular momentum is enough to swing the Gulf Stream onto a southerly path that will direct it into the Bay of Biscay instead of into the North Sea. The Arctic will then freeze and Northern Europe will cool, just like happened during the Little Ice Age. And the date by which it will happen is the year 2050. To me it sounds plausible even though I have not done the calculations. It should be interesting because there are people now living who will find out whether or not this theory works.

GEOGRAPHIC PERSPECTIVE

Satellite views can help us put the foregoing discussion into perspective and help us understand the geographic background. Figure 3 is a satellite view of the Arctic and North Atlantic oceans in 2009 that shows warm water reaching as far into the Russian Arctic as Novaya Zemlya and beyond. The flow is strong because concurrent radar altimetry shows positive anomalies along the coast from Norway to Novaya Zemlya. The Gulf Stream can be estimated to have melted away almost one third of the Arctic sea ice that should have existed in its absence. The satellite view also shows some warm water entering through the Bering Strait in the background. This keeps the Chuckchi Sea, just north of the strait, open, and may reach as far as the Beaufort Sea north of Alaska. It is a lesser source of warming than the Gulf Stream is but occasionally winds or other factors may push more water through. This is apparently what happened in 2007 as Figure 4 shows. A huge patch of open water appeared on the Bering Strait side of the Arctic Ocean while the Russian Arctic in the east did not change much. The Big Melt of 2007 was apparently an outlier, however, because there is no precedent for it and it is not part of a trend as Figure 4 tells us. Its most immediate cause is the unusual amount of warm water that strong poleward winds pushed through the Bering Strait that year. The source of the warm water is the Bering Sea. Such warm

currents, entering the Arctic from both sides of the ocean, can account for all of the observations of Arctic warming now and in the past. Carbon dioxide greenhouse effect, not even with the help of a mythical “Arctic amplification,” cannot do that because it would be a violation of the laws of physics.

Figure 3. Satellite view of Arctic sea surface temperatures. Light blue color traces penetration of the warm Gulf Stream water into the Arctic. It has eaten away roughly a third of the sea ice that would otherwise have existed and thereby freed the Russian Arctic ports of ice. Lesser amounts of warm water can be seen entering via the Bering Strait in the background. This keeps the Chukchi Sea open.

Figure 4. Arctic Ocean sea ice in September. Left panel is an average of twenty two years obtained by superposing yearly pictures from 1979 to 2000. Second panel shows the ice in 2006, a year before the big melt, and the third one is the melt year, 2007. I drew the arrows to show the path of warm water entering the Arctic from two sides. NOAA Sea Ice Index.

IMPLICATIONS FOR SOCIETY

Implications of the fact that Arctic warming is not greenhouse warming go far beyond the Arctic itself. Very noticeable signs of Arctic warming have been used as proof that greenhouse warming is real. But it was also known for some time that this warming proceeded faster than greenhouse theory predicts. To explain this it was necessary to invent an “Arctic amplification,” a kind of a *Deus ex machina* that would explain the difference between observed and predicted warming. The story goes that ice and snow have an albedo that reflects a substantial part of sunlight back into space. But once the snow and ice melt a darker substrate is exposed which will then absorb more energy from sunlight and speed the warming process. Recently, Screen and Simmonds [4, 5] tried another angle to explain Arctic amplification despite the fact that Polyakov [7] had already checked and reported its absence. They assumed that loss of sea ice cover exposes darker ocean water which then absorbs more of the incident sunlight. But even with the help of this Arctic amplification device climate models were still unable to predict the course of warming accurately. Thus, according to Kwok and Untersteiner [15], the IPCC-AR4 report in 2007 grossly underestimated the rates of thinning and shrinking of the sea ice during the past 30 years. We now know why: the Arctic warming is not greenhouse warming and you can’t use models set up for greenhouse warming to predict how non-greenhouse warming behaves. Still, with the ice cover shrinking, Greenland ice calving, and polar bears in trouble, the Arctic has remained a showcase of global warming to this day. Unfortunately for this view it is neither global nor greenhouse by nature and is caused by warm currents as we have seen. Potentially the Arctic is a huge untapped source of energy because a fifth of the

world's undiscovered petroleum resources are said to lie under this ocean. While modeling results are useless for Arctic exploration, empirically the opening of navigable routes has encouraged plans for future development of Arctic resources. But the Arctic is not the only place where climate modeling has failed. None of the IPCC models have been able to reproduce the rapid climate changes that began with the super El Nino of 1998. Figure 5 shows the entire satellite record with annotations. The red highlight outlines global temperature and its width determines the statistical limits of natural variability. I left it off the super El Nino because it is an outlier interpolated into a spot where a La Nina should have existed. I had trouble explaining its energy source because all of the warm water from ENSO was bespoke for by the regular El Ninos until I realized that a large storm surge near the origin of the equatorial countercurrent could explain it. The only global warming that satellites do see is a short spurt starting with this super El Nino [18]. It is a step warming that raises global temperature by a third of a degree in four years and then stops. Its cause is the warm water brought over the ocean by the super El Nino. It lingered near the coast and warmed the prevailing westerles. There was no warming before this and none after. On the left side of the figure are warm El Nino peaks with cool La Nina valleys in between that constitute the ENSO oscillation.

Figure 5. Satellite measured global temperatures (red highlight) from 1979 to May 16th 2011. This is an update of Figure 15 in my book. Blue horizontal line is mean temperature. It is discontinuous where a step warming took place. Warming started with the super El Nino and in four years raised global temperature by a third of a degree. There was no other warming for 31 years.

The horizontal blue line is the mean temperature. You find this mean by putting a yellow dot in the middle of each line connecting an El Nino peak with its neighboring La Nina valley and then connecting the dots. This is because ENSO is an actual physical oscillation of ocean water from shore to shore. Although it is not a perfect harmonic oscillator because of other influences in the ocean this is the best approximation to its mean temperature you can get. Because of the step warming the mean temperature lines on the left and on the right do not meet. It is not permissible to join them together by a single curve. On the right side the temperature curve extends into a six year warm period, the twenty first century high. As mentioned the cause of this warm platform is warm water near the east coast of the Americas. This, and not the greenhouse effect is responsible for the very warm first decade of our century. It ends with a La Nina cooling in 2008 which signified the return of ENSO oscillations as the figure shows. But there are discrepancies between this satellite temperature curve and ground based temperature curves from NASA, NOAA, and the Met Office. Ground based curves show a “late twentieth century warming” in the time slot that corresponds to the ENSO oscillations on the left side of Figure 5. This warming just happens to be the same warming that Hansen testified about in 1988. And when it comes to the 21st century carbon dioxide is still increasing, predicted temperatures are increasing, and what do you know – land-based temperatures are also increasing! Satellites do not see this temperature increase and when the real temperature descends into a La Nina cooling this is impossible to hide. It panicked the big shots as Climategate emails [19] show. Here is Kevin Trenberth’s reaction to it: “The fact is that we can’t account for the lack of warming at the moment and it is a travesty that we can’t. The CERES data published in the August BAMS 09 supplement on 2008 shows there should be even more warming; but the data are surely wrong. Our observing system is inadequate.” And then comes Keenlyside [21] to the rescue. First, he admits that the IPCC prediction of warming for the first decade of the century was wrong. That was easy because the thermometer says so. But not to worry, he tells us, computer models he constructed show that while the surface temperature may not increase over the next decade, global warming will return in force by 2015! His prediction involves changes to the Meridional Overturning Circulation (MOC) but he has no data to back it up. If there ever was a lame excuse for no warming, this is the one. But this is not how Hansen [22] sees it. He still stands by the “Scenarios” from his 1988 testimony and shows how one of them, Scenario B, predicted global warming well until 2005. First, he does not tell us that this Scenario was set up for CO₂ constant at its 1988 value. This obviously did not happen. Secondly he was also lucky with the cutoff date because after 2005 his curve goes up and completely departs from all global temperature curves. But warming curves have been the life blood of global warming advocates for years and the ones showing warming in the eighties and nineties are definitely cooked. This can be easily seen if the published curve and the satellite curve are plotted with the same resolution and in the same coordinates on a single graph as I did [16]. And this phony warming has gotten governments to fund expensive renewable energy programs, emission controls, cap and trade, carbon taxes, and you name it. If fully implemented such programs will cost trillions of dollars and basically wreck civilized life, all for nothing. All their models assume that addition of

Greenhouse effect and the 21.6 % increase of CO_2 in the last 61 years are unrelated
 Atmospheric H_2O does but CO_2 does not correlate with the IR optical depth

Figure 6. Miskolczi's determination of the IR optical depth [23] of the atmosphere.

The means of seven different time series from the NOAA database are identical within three significant figures. This graph was presented to the EGU in April 2011 [12]. Copyright ©2011 by Ferenc Miskolczi.

carbon dioxide to the atmosphere generates a so-called enhanced greenhouse warming. The word enhanced is dropped by the IPCC in the name of simplifying language [17]. But their assumption is pure theory. They have never attempted to produce a time series of infrared absorption measurements by the atmosphere that would verify this assumption. And not for lack of money because they are funded by billions of research dollars by the public. Fortunately Ferenc Miskolczi, a Hungarian scientist at NASA, found a back door way to get this information anyway [11]. Using NOAA's weather balloon database that goes back to 1948 he was able to show that the transmittance of the atmosphere in the infrared where carbon dioxide absorbs has not changed for the last 61 years. During that same period the amount of carbon dioxide in the air increased by 21.6 percent. This means that the enhanced greenhouse effect from this additional carbon dioxide was simply not there. Figure 6 shows his results graphically. The infrared optical depth [23] values shown in this figure were computed from seven subsets of the NOAA database using the HARTCODE program and then automatically plotted by MATLAB. Constancy of the IR optical depth of the atmosphere which these data reveal is an empirical observation of nature, not derived from any theory. This fact overrules any calculations from theory that do not agree with it. It does not mean that there is no theory, however. There is, and it predicts a

stable IR optical depth of 1.87 for the atmosphere [11, 12, 13]. He predicted this before he used this NOAA database. All the mean values obtained from the seven subsets of the NOAA database are very close to his theoretical value as can be seen from the graph. The absence of an enhanced greenhouse effect used by IPCC is one consequence of the existence of this stable optical depth. In science a theory that does not correctly predict observations of nature must be modified or discarded. And the theory that is used by the IPCC to predict an enhanced greenhouse warming from the added carbon dioxide is one such theory. A corollary to this is that all computer programs that have been predicting dangerous global warming are completely wrong. Putting a non-existent greenhouse effect into a computer is like putting in garbage. And when you put garbage into a computer you get garbage out too. In short, GIGO. Super-GIGO actually because it comes from supercomputers they cheated out of Uncle Sam by telling scare stories. But these computer predictions have been and still are used to convince governments to spend money on “mitigation“ of a non-existent warming. This money is just totally wasted. An example is using windmills to produce “clean“ electric power. Governments in the throws of converting to clean energy to save us from being fried are pushing it, regardless of cost. Denmark was ahead of everybody in Europe with wind power development when suddenly in 2002 they announced a moratorium [20] on building further wind power stations. And next year Ireland followed suit. The reason? Wind does not blow all the time and they found that when there was no wind they had to buy expensive electricity from Germany. And at other times when the wind was strong they produced more than was needed. Since you can't save surplus electricity they ended up selling it to Norway below cost. Furthermore, they found that due to variable winds their windmills were constantly going on and off line. This destabilized the grid and they were obliged to keep a coal-fired power station on line to back them up. And all this gets added to the expense and to the emissions the windmills were supposed to reduce! By 2009 they had still not been able to shut down even one of the fossil fuel power stations that wind power was supposed to replace. The bottom line is that the Danish people ended up paying the highest electric rates in Europe. But none of this impressed Great Britain and Germany who went ahead with their own grandiose plans for wind power. Wind power is simply not competitive with power from fossil fuel fired plants. In all cases where it is used the government has to subsidize it. In the UK it ends up on the customers' utility bills without telling them. The UK windmill operators get as much money from subsidies as they get from selling power. That is the only way they can stay in business in competition with cheap power from fossil fuel and nuclear power stations. And their windmills actually deliver only a quarter of the “rated“ power they are advertized to produce. They also spoil natural landscapes and kill birds and bats but environmentalists pushing for wind power are totally silent about this. And the human costs of other “mitigation“ efforts are also mounting. The drive to use food crops for production of biofuels has driven up the price of grain, doubling it in some instances. This is felt mostly by poor people in the developing world and has led to food riots that our press studiously ignores. The alcohol that is used for biofuel and mandated to be used more and more by law is not competitive with gasoline either and has to be subsidized like wind energy projects. And another thing they don't tell you about

biofuels is that fermentation to produce ethanol also produces almost as much carbon dioxide as ethanol. There are also plans to produce energy from “clean” coal by which is meant that the carbon dioxide from combustion is captured and either buried underground or in the ocean. The technical problems to do this safely have not yet been solved but it is quite certain that the cost will at least double the price of electricity. These activities are all paid for by the taxpayers but they do not produce anything useful. And since they are done in the name of preventing a dangerous global warming that does not exist they are a colossal waste of money and resources. Europe now has a cap and trade law and has just proposed to put a pollution tax on all planes landing in Europe. We escaped from Obama’s cap and trade project thanks to the Senate but now the administration is trying to bring it in through the back door by enhancing the powers of the EPA. I call these and numerous other similar measures that governments have implemented a collective insanity of the Western World. Their price is likely to be in trillions of dollars, all of it wasted.

SUMMARY AND CONCLUSIONS

Present Arctic warming started at the turn of the twentieth century. Its probable cause is a change in the North Atlantic current system that directed warm water from the Gulf Stream into the Arctic Ocean. Prior to that there had been only slow cooling for two thousand years according to Kaufman et al. A foraminiferal core taken near Svalbard by Spielhagen et al. also shows the same long term cooling. Rapid warming of Greenland glaciers, polar bears in trouble, permafrost melting, the Northwest Passage becoming navigable etc. have been used as proofs that greenhouse warming is real. Since it is now clear that Arctic warming is not greenhouse warming these observations cannot be used as proof of greenhouse warming. It is therefore incumbent upon us to look at what other proofs remain of the existence of greenhouse warming. Most axiomatic is the claim that we are now living through a greenhouse warming period that started with a global temperature rise in the late seventies. After all, Hansen said so in his testimony to the Senate. But satellites which have been measuring global temperature for the last 31 years cannot even see this so-called late twentieth century warming. What global warming they do see is a short spurt that began with the super El Nino of 1998, raised temperature by a third of a degree in four years, and then stopped. Its origin was oceanic. And this satellite record is in accord with the observations of Ferenc Miskolczi on IR absorption by the atmosphere. A third of a degree may not sound like much but it is half of what is allotted to the entire twentieth century. It, and not the greenhouse effect, was responsible for the very warm first decade of our century. But there are ground-based temperature curves that do show warming in the eighties and nineties. These are simply cooked, as in falsified. It was done by systematically raising up the cool La Nina temperatures and leaving the warm El Nino peaks in place. This fake warming was then used to justify the establishment of the IPCC in 1988. According to satellites there has been no warming in the twenty-first century either but thanks to the IPCC we still get major governmental efforts to “mitigate” a non-existent warming. The global warming extremists today are not just in charge of government policy but have also infiltrated and taken over control of our scientific organizations. Those who should be our scientific leaders, such as the Royal

Society and the National Academies of Science, have all knuckled under to extremist propaganda and now support the global warming movement. As a scientist I repudiate such a mass dereliction of their mission to advance science. Last time the scientific elite espoused such wrong ideas was in the eighteenth century when phlogiston was king. They renamed it caloric to make it more palatable but it still would not fly and both imaginary concepts ended up in the dust bin of history. That is where the global warming doctrine belongs.

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