

Logical Impossibility of Reconciling Global Warming Alarm with Little Ice Age Temperatures

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Abstract

The recent paper by Ineson et al. presents climate model computations for the global temperatures up to 2100. As a novelty vs. other simulations, the computations include a variable sun output with assumed Maunder minimum-like conditions by 2050. They conclude that a decreasing sun activity will not save us from the most of the up to +6.6 °C global warming by 2100 that is the upper range of the climate model predictions. We show the evidence of nearly constant temperatures since 1988 that are in complete disagreement with the climate model predictions also in their lower range, and the almost constant solar activity since 2003. We conclude that the so called climate models, in reality a very simplistic correlation of global temperatures to the carbon dioxide emission, having failed to predict the observational evidence over this century, for no reason will do any better for what is left of this century. We finally note the logical impossibility for global warming to continue at the same time as a little ice age.

Keywords

Climate Models Prediction, Measurements, Little Ice Age, Sun Influence on Climate

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1. Introduction

The science of global warming relies heavily on the use of models, proxies and reconstructions while neglecting the actual direct measurements. For example a recent paper by Karl et al. proposes negating the existence of a hiatus in the world temperatures since 1998, based on an arbitrary redefinition of the temperatures of the past and so replace the presently flat trend with a warming trend [1]. We already commented as the effect of global warming should be proved by higher temperatures measured today and not by retrospectively lowering the temperatures of the past by manipulating the data and then subjecting it to some computational procedure continuously evolving in one given direction [2].

Actual measurements of the lower troposphere temperatures (LTT) by satellite, such as RSS [3] or UAH [4], should

certainly deserve more attention than the flawed reconstructions by HadCRUT [5], GISS [6] or NCDC [7] that are not independent but share many components. If the LTT times series of [3] or [4] clearly show a hiatus, matching that shown by the average of the ground thermometers (not contaminated by localized heat problems), there should be no space left for speculation. Unfortunately the alarmists prefer the obscure result rather than the clear one if it does not support the global warming narrative.

Ineson et al. [8] claim the sun activity is presently declining while the temperatures are increasing.[thus further magnifying the presumed influence of the carbon dioxide content in the atmosphere,] They try to reconcile the global warming alarm even while predicting little ice age temperatures [8, 9] *“Here, we explore possible impacts through two experiments designed to bracket uncertainty in ultraviolet irradiance in a scenario in which future solar*

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activity decreases to Maunder Minimum-like conditions by 2050. Both experiments show regional structure in the wintertime response, resembling the North Atlantic Oscillation, with enhanced relative cooling over northern Eurasia and the eastern United States.”

Aim of the paper is to expose the flawed logic of supporting simplistic models based on a single forcing failing validation vs. any measurements while discussing the weaknesses of this latest work.

2. Reconciling Global Warming Alarm with Little Ice Age Temperatures

As some solar physicists have suggested that we are heading towards cooling like that seen during the “*Maunder minimum*” about 300 years ago, the computational study of [8] is aimed to show that even a reduction of the sun output could not save us from global warming. They do this by using flawed climate models in the most unrealistic scenarios of carbon dioxide emissions only accounting for the hypothetical variable sun output. Apart from the fact that “*experiments*” are usually conducted in the present time, and this paper is actually talking about one more round of “*simulations*” for the decades to come, the paper does not even mention the evidence that temperatures remained about constant since 1988 (RSS or UAH lower troposphere results) – the well-known “*hiatus*” - and solar activity similarly about constant since 2003 (SORCE satellite results).

The Solar Radiation and Climate Experiment (SORCE) satellite mission [10] is providing state-of-the-art measurements of the incoming x-ray, ultraviolet, visible, near-infrared, and total solar radiation since January 2003. The temperatures are not warming since 1998, as proven by the satellite monitoring returning information since November 1978 and the average of the unbiased ground thermometers recording even for more than a century. In areas not heavily industrialised where the thermometer readings are not contaminated by urban heat island formation and other human activities having nothing to do with the changed composition of the atmosphere, such as rural Australia, the temperatures since the end of the 1800s are not warming but are actually remarkably stable, with a pattern of multi-decadal oscillations of about 20 and about 60 years about a longer term trend. Since 1910, the rural Australian locations have experienced only a small warming of the order at the most few tenths of °C per century. Since 1998, there is no warming, in perfect agreement with the LTT result.

Focusing on the recent high quality data we have, and neglecting the earlier information that is very controversial as

it has been subject to continuous arbitrary revision, Figure 1.a and b shows the temperatures have been warming from 1979 to about 1998, but are not warming since then.

Figure 1.a presents the summary comparison of the global air temperature estimates all normalised by comparing to the average value of 30 years from January 1979 to December 2008, the RSS and UAH measured lower troposphere temperatures and the surface air temperature reconstructions by GISS, NCDC and HadCRUT. This image is from [11]. The heavy black line represents the simple running 37 month mean of the average of all five temperature records. The GISS, NCDC and HadCRUT reconstructions have much larger warming since 1998 resulting from continuous arbitrary corrections changing the past temperatures over different rounds of corrections. The RSS and UAH measurements have very little warming since 1998.

Figure 1.b proposes as an example the HadCRUT result before and after the correction of May 2014 that has replaced the global warming “*hiatus*” since 1998 with a small warming. This image is from [11]. The norm rather than the exception of the GISS, NCDC, HadCRUT and many other “*reconstruction*” is that the future carbon dioxide emission always translate into retrospective changes of temperatures, sometimes going back for more than a century [2]. Despite these arbitrary corrections to produce some sort of evidence that looks like the climate model results, the differences are still substantial.

The GISS, NCDC, HadCRUT products are subjected to continuous corrections almost every months. These small changes are introduced with the clear purpose of ensuring compliance with the global warming narrative by arbitrarily lowering the past temperatures to compensate for the lack of any warming in the freshly collected temperatures. The reader may certainly learn by comparing the different data sets months after months, even if this requires downloading the data sets periodically as only the latest version is usually distributed by the managing organizations. The comparison of GISS v2 vs. v3, an abrupt change occurred in November 2011, is still permitted by GISS in [15] and [16]. This change was not the monthly largest change introduced by GISS to enforce compliance of global temperatures with climate model computations, and actually globally minimal. However, the change resulted in completely different patterns of temperatures in selected non-cooperative locations as Australian rural areas, central South America or the Arctic, were coolings or no warmings were all transformed in significant warmings, even if at the expenses of less warming in already massaged or corrupted locations. The many stations that experienced a drastic cooling of the temperature of the past century and in the first few year of this century with the change v2 to v3 is exposed by many bloggers as for example

[17] and [18].

After the redefinition of the stations to include and neglect in the global network, and the procedure to compute global time series by using scattered data of unequal length, the latest trend is indeed to override what the thermometers actually measured.

As the world temperatures are affected by a quasi-60 years' oscillation with positive (warming) phases about 1910 to 1940 and about 1970 to 2000, and negative phases about 1940 to 1970 and about 2000 to present, the start from the time of a valley of the peaks & valleys oscillation magnifies the actual warming trend computed as the slope of the linear fitting curve.

Figure 1.c presents a comparison of the climate model predictions with the experimental evidence. As a prerequisite for forecasting is validation, the climate models should not be applied to any forecast, since their validation is so poor.

Figure 1.c is a comparison of the climate model predictions with the HadCRUT and UAH result. This image is from [12]. The comparison of 5 years running averages of temperatures from models, measurements and even biased reconstructions was commented in [12] as “95% of Climate Models Agree: The Observations Must be Wrong”. We prefer to conclude with 95% certainty that the climate models are wrong. With this sort of evidence against the use of climate models for forecasting, it is a surprise to read about one more computational speculation.

[8] is playing the upper band of the climate models already estimating the warming some order or magnitude larger than the real one to minimize every other forcing, for example little ice age like sun irradiance. To make the exercise even more unnecessary, the sun output does not seem to have been drastically reducing over the “hiatus” as it should to demonstrate the climate models are not wrong.

Figure 1.d shows the measured total solar irradiance (TSI) from the SORCE experiments, perfectly stable over the 11 cycle period covered so far including two peaks and one valley. While the increased sun activity based on the very poor accuracy sun spots number may be responsible for some of the warming in the past century, the novel experiments of this century do not support any claim the TSI is presently reducing to explain the lack of any warming. When good measurements are available there is no reason to correct these measurements to support narratives or even use corrected proxies.

Figure 1.d presents the SORCE TSI total irradiance results 2003 to present (from [13]). The sun spectra and the irradiance at different wavelengths are also presented in [13]. These data clearly demonstrate that over the 15 years of this

century whilst there has been very little warming in the lower troposphere there has also been a relatively stable sun output. The total solar irradiance is actually increasing, as the latest peak values of 2014-2015 are higher than the previous peak values of 2003-2004. To be precise, the sun's spectral irradiance in space where the SORCE monitor is located has peaked at about 450 nm, and at different wavelengths, there is no significant trend at the low wavelengths 121, 200, 300 and 400 nm, while at higher wavelengths 500 or 600 nm the trend is of increasing sun irradiance. However, we have some doubt the extremely simplistic climate models have the capability to account for different sun irradiance at different wavelengths.

3. Discussion

The LTT is characterized by oscillations about a warming trend from 1979 to 1998 and a flat trend from 1998 to the present. Neither the single cause of a variable solar output nor the single cause of the anthropogenic carbon dioxide emission can explain this. The LTT pattern certainly involves many more factors and requires a detailed description of the relevant parameters over time scales long enough to permit explanation of a trend. There is no certainty about the causes that produced the warming 1979 to 1998, or the reason for the lack of any warming over this century, when sun output was stable. The only certainty is that the climate models are all failing to match the observational evidence since the time the computations were first performed.

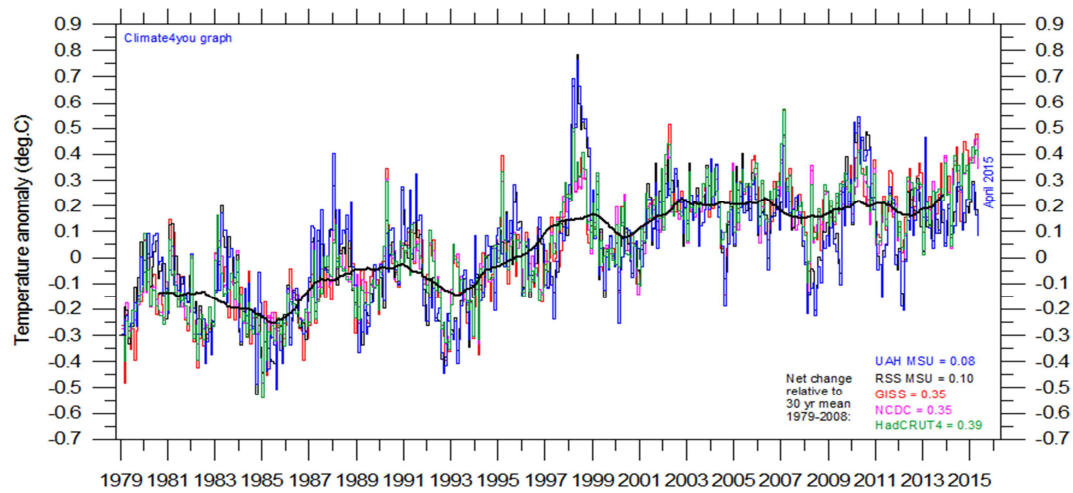
4. Conclusions

The authors of [8] believe the anthropogenic forcing will overwhelm the decreasing sun activity, in the context of the modelled anthropogenic warming of up to +6.6 C by 2100. They consider it serious science to have global warming scares while experiencing little ice age style winters. We consider this a logical impossibility: it is a contradiction in terms.

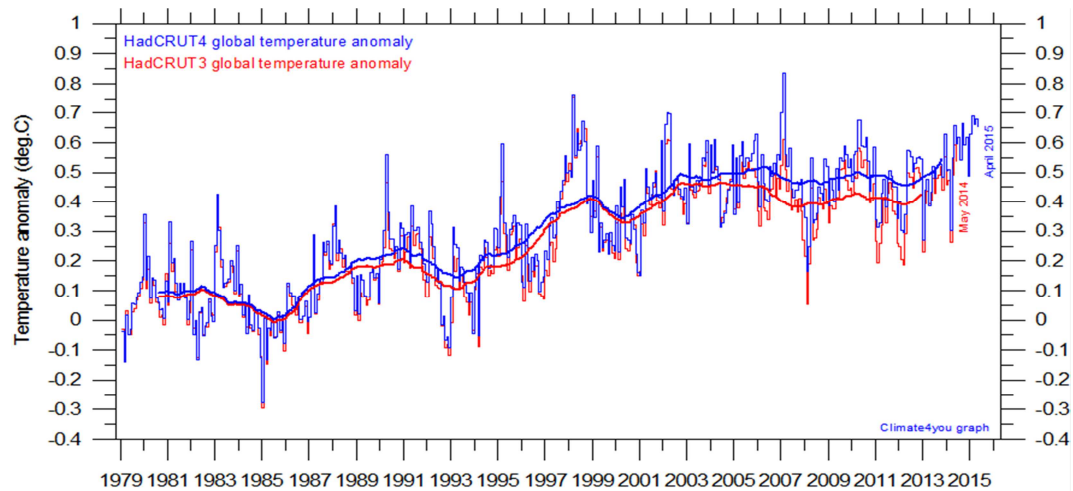
Before attempting to apply models to compute the surface air temperature as far as the end of this century, the authors of [8] should certainly attempt to validate their model with the actually measured temperatures over the years already elapsed during the present century, also including the stable measured total solar irradiance. Models failing validation in the short term should not be considered reliable for the long term.

Figure 1 synthesizes the evidence we do have for the changing climate of this century. The temperatures are fairly flat, as flat is the total solar irradiance. The climate model predictions are therefore wrong. Contrary to the claims of the

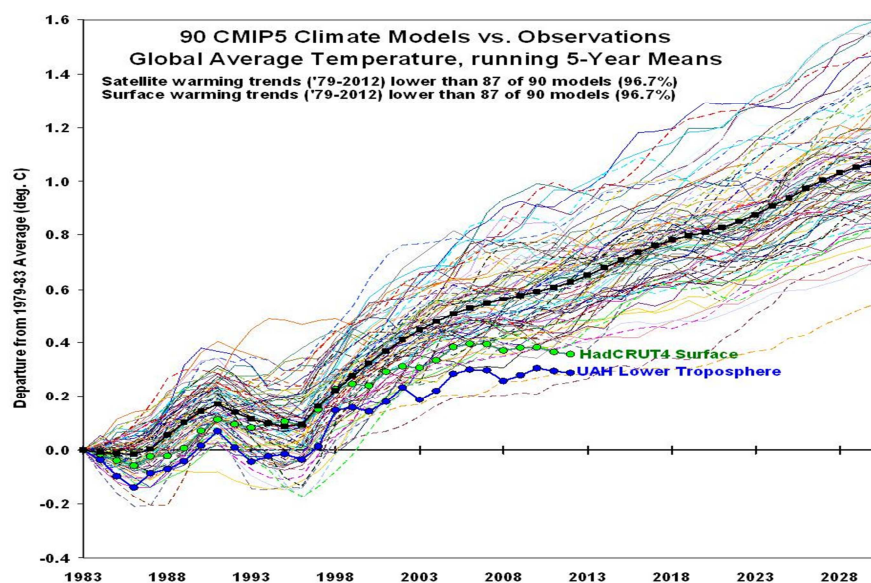
commented paper, in case the total solar irradiance should reduce up to the values of the Little Ice Age by 2050, the temperature will reduce accordingly.



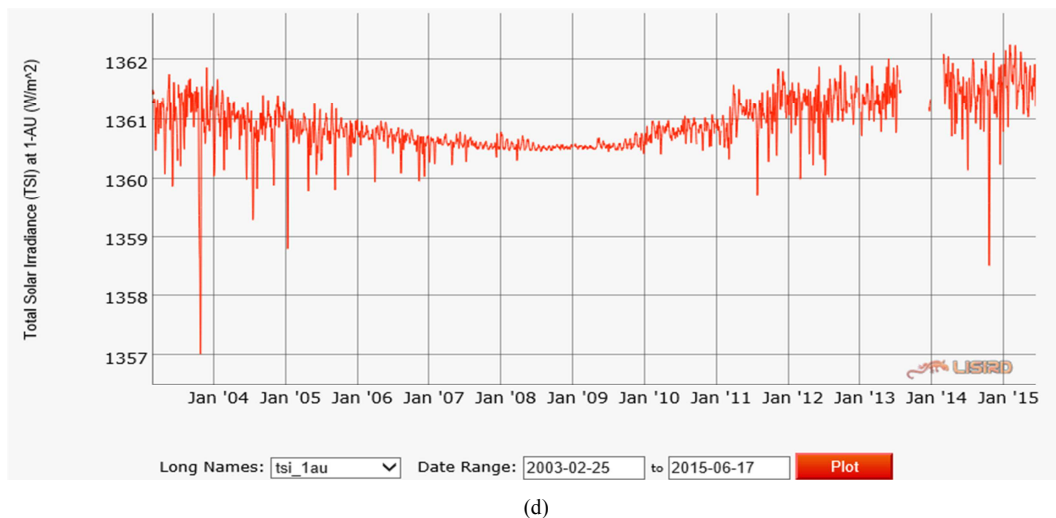
(a)



(b)



(c)



(d)

Figure 1. a) is the summary comparison of the global air temperature estimates RSS, UAH, GISS, NCDC and HadCRUT all normalised by comparing to the average value of 30 years from January 1979 to December 2008. The heavy black line represents the simple running 37 month mean of the average of all five temperature records. b) is the example of the HadCRUT correction of May 2014 that has replaced the global warming “hiatus” since 1998 with a small warming. The images a) and b) are from [11]. c) is a comparison of the 5 years running averages of temperatures from 90 climate models, UAH measurements and HadCRUT reconstructions. The image c) is from [12]. d) is the SORCE TSI total irradiance results, 2003 to present. The solar irradiance seems fairly stable over the first 15 years of this century, similar to the lower troposphere temperatures. The image d) is from [13]. Of the up to 6° C warming by the end of this century the missed part is still the whole warming, and this cannot be explained with a drastic reduction of the sun output that does not seem to have changed that much.

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