

'Climate Science Special Report' Great Science Fiction? – Poor Science Fact!

Released this November, The Climate Science Special Report (CSSR) prepared by the U.S. Global Change Research Program is a legacy from the Obama Administration. It is the latest edition in a long line of government reports linking human emissions of carbon dioxide with just about every climate and weather event that we observe today. They call this “a philosophical argument that there are no longer any purely natural weather events.” That alone should be a big hint that this latest paper is about religious philosophy, not science. Science involves theories and story-telling for sure, but the only stories that are supposed to endure are those for which we have clear logic and evidence.

Great leaps of faith are the hallmark of science fiction.

The best science fiction contains a lot of science fact, requiring only a few great leaps of faith. That helps to create believability. The CSSR contains great detail and many references to like-minded scientists that add to its realism. It stresses that CO₂ is a greenhouse gas that will cause the Earth's atmosphere to warm a little in the absence of other effects, and that atmospheric CO₂ has risen modestly over the last 70 years. It also stresses that the Earth's temperature has risen slightly since the depths of the Little Ice Age of the 1700s and since the end of the Second World War. All of that is easily established in any number of ways. The reader is then supposed to link the increase in atmospheric CO₂ with rising temperatures.

But wait a minute! Our climate is the interactive sum of a great many effects. Why has it suddenly been reduced to evil carbon dioxide? This is the first of the great leaps of faith. All of the natural causes of climate change are obviously still around, but the CSSR story wants everyone to believe that they have been completely eclipsed by CO₂. They admit to some, such as our oceans and sun, but assure their readers that all are now minor compared to the great Satan, carbon dioxide. That is fine for science fiction, where we are encouraged to play along with the story line to see if man will survive the coming CO₂ apocalypse but horrible for science where we want every known natural climate driver evaluated to determine actual importance.

In the end, competent scientists prefer the simplest explanations, the most likely over the least likely, and the one with the fewest assumptions. This problem solving technique is called “Occam's Razor,” after William of Ockham, a Medieval English Franciscan friar and philosopher. In climate science, a natural explanation involves no leaps of faith, a supernatural one many.

The central thesis of the CSSR is that we live in an age where weather and climate have gone substantially berserk, because we have added a little CO₂ to the atmosphere, creating a “runaway greenhouse effect.” That makes for great drama but not great sense. The most basic physics of our climate points out that we live on a fluid planet with vast oceans and atmosphere that are never in equilibrium. Large variations from average climate are completely normal. From day to day variations to year to year, decade to decade, century to century, and even millennium to millennium, **our climate needs no external forcing to vary substantially.** When external forcing is applied, as with Milankovitch cycles involving changes in the Earth's orbit, the great climate variations called Ice Ages

come into play. Similarly, variations in solar irradiance and galactic cosmic rays probably play a role in our constantly changing climate. The primary scientific issue is the relative importance of the extraterrestrial effects to those within our terrestrial climate system.

The possibility of catastrophe from “a runaway greenhouse effect” is itself a great leap of faith in the CSSR. As the recent past President of the US National Academy of Sciences and a prominent warmer, Ralph Cicerone said: “We don't have that kind of evidence.” Even though water vapor is, by far, the major greenhouse gas in the atmosphere, we have never seen evidence of a climate catastrophe from a runaway water vapor event. And in previous epochs, where there was far more CO₂ in the atmosphere, we have no evidence of runaway heating, let alone good correlation between the Earth's temperature and atmospheric CO₂.

Hence, the possibility of catastrophe is complete science fiction.

Yet the CSSR shows a graph of relentlessly rising temperatures that is supposed to scare everyone. It is one of many that have been developed from surface station records to show more warming than the individual station records reveal. Dr. John Bates of NOAA blew the whistle on his colleagues at NOAA in early 2017 for cooking the books prior to the 2016 Paris Climate Conference. But in truth, the practice was widely established long before, as revealed by the Climategate scandal. Proponents of the science fiction have felt for a long while that the data needed to fall in line with the theory, in direct contrast to the way that real science works. Hence, the leap of faith here is a reversal of the Scientific Method. Others might simply call it fraud.

Claims that we are warmer today than we have ever been are yet more science fiction. If we look at measured Arctic temperatures over more than a century, we see a relatively large rise since about 1979. But that is substantially similar to the large rise in the first half of the 20th century to much the same peak we see today. If the recent rise were caused by rising atmospheric CO₂, what caused the previous rise? There was no similar rise in atmospheric CO₂ back in the early 20th century.

Similarly, global temperature reconstructions from ice cores in the polar regions using the very sturdy oxygen-18 technique show great temperature variations over the Ice Age cycles that completely dwarf recent changes. (Figure 1)

If we focus on just the last few thousand years, since the Holocene Climate Optimum, we still see temperature variations that dwarf those observed recently. It was hotter during all of the previous Warm Periods that go by the names of the civilizations that they spawned: Greek, Roman, and Medieval. (Figure 2)

Undoubtedly the greatest leap of faith in the CSSR is that the 'Climate Models' accurately depict our climate.

As the CSSR explains, “Global climate models are mathematical frameworks that were originally built on the fundamental equations of physics.” We are therefore supposed to believe that they are infallible. The hint that they might not be are the words “originally built.” They began with fundamental physics, but when confronted with the vast complexity and chaos of a fluid planet had to be greatly simplified to the extent that they are hardly more than computer games today. Such games are designed to look very convincing, like a Hollywood movie, but they are science fiction. We can easily see that they are fiction by comparing their predictions against robust empirical data. (Figure 3)

The Climate Models are not even close to reproducing observations. This is well known among climate scientists but never mentioned in the CSSR. Even some members of the US National Academy of Science who are proponents of the paradigm admitted to the failure of the models, albeit obliquely, in Santer et al., PNAS 2012. The last of their tables shows the average climate model running hot by a factor of about two in both the crucial lower and middle tropospheres. Such a large discrepancy is fatal in science but just another leap of faith in science fiction.

Nobel Laureate in Physics Richard Feynman said "If it disagrees with experiment it is wrong. In that simple statement is the key to science."

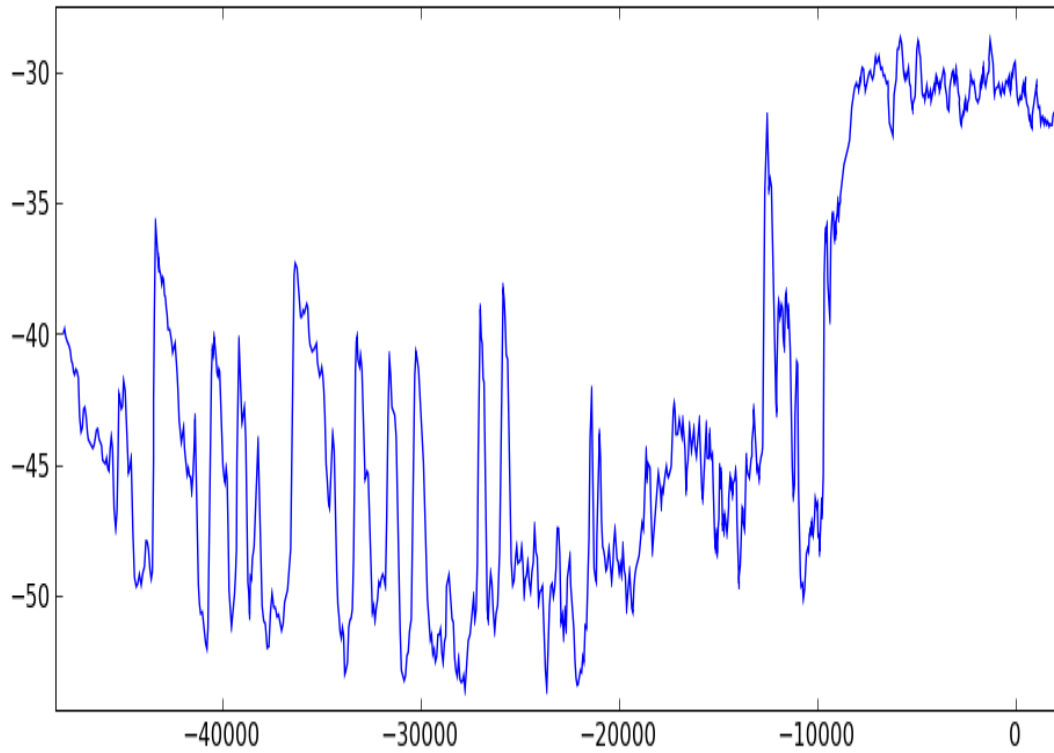
Circular Reasoning dooms the CSSR.

The fervent devotion to the climate models leads the CSSR into the greatest sin in science and even in science fiction: circular reasoning or assuming what you set out to prove. The CSSR is so desperate to convince the public that they are correct that they use their models for what they term "attribution." Namely, they extract a CO₂ signature from a host of weather and climate events, using models that have an overblown CO₂ signature already built in! That is no proof of anything except self-delusion.

They even go so far as to claim attribution *without detection*. That means that they claim to now see the effects of enhanced atmospheric carbon dioxide in situations where there has not been any warming or any other excursion from "normal." That is equivalent to seeing the Hand of God in every situation. It is a religious experience, surely inappropriate for science or even science fiction.

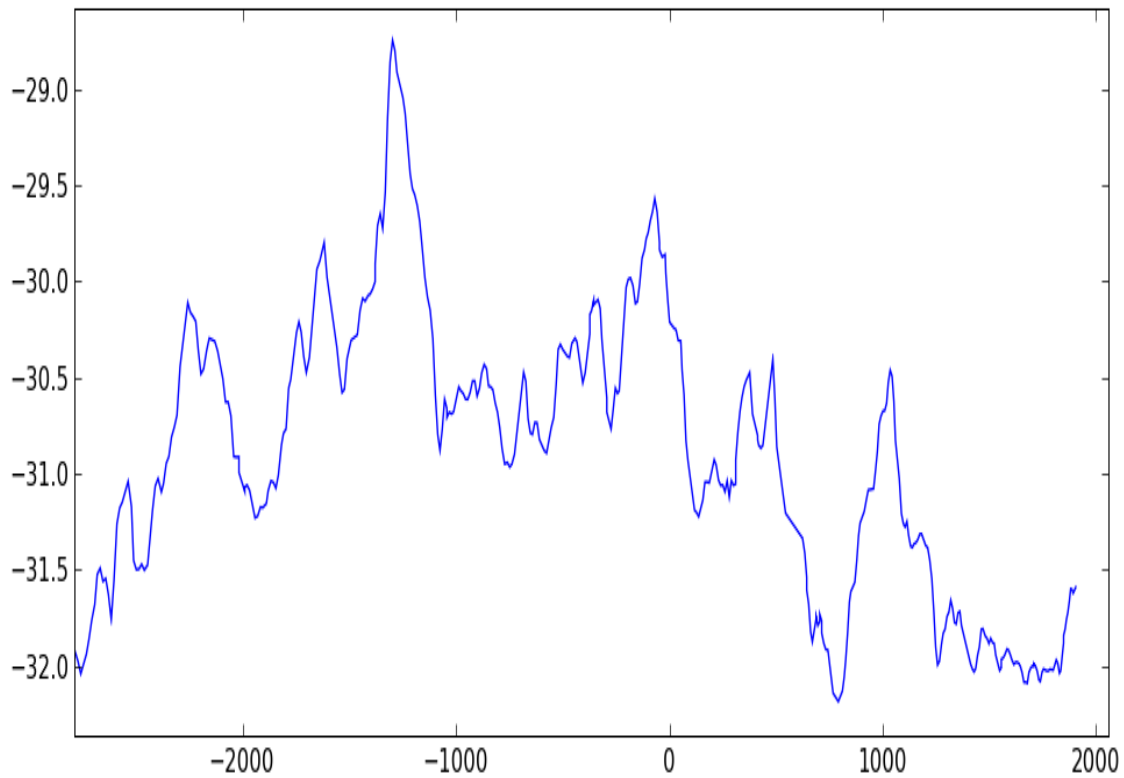
Science with great leaps of faith is science fiction. But even science fiction with too many leaps of faith and seriously faulty logic has no claim to even being science fiction. It is just fiction or delusion or religion or political propaganda. Fiction presented as fact to scare taxpayers into supporting a paradigm is fraud.

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Degrees Celsius in central Greenland versus Years from the birth of Christ

Figure 1. The Earth's climate history over the last 50,000 years, derived from Greenland ice cores using the Oxygen-18 temperature proxy. Note the long Ice Age followed by a relatively brief interglacial period beginning about -10,000 BC. (Source: R.B. Alley, NOAA Paleoclimatology)



Degrees Celsius in central Greenland versus Years from the birth of Christ

Figure 2. Same data as in Figure 1, but showing only the last 5,000 years. This is the interglacial period called the Holocene Climate Optimum. Note the prominent warm periods within the Holocene that go by the names of the civilizations they spawned: Minoan or Greek (from -2000 to -1000 BC), Roman (just before the birth of Christ), Medieval (about 1000 AD), and the Modern (from about 1830 to the present). The peak of the Modern warm period that we are enjoying now is not available from the ice core technique. But other proxies place it colder than the Medieval peak.

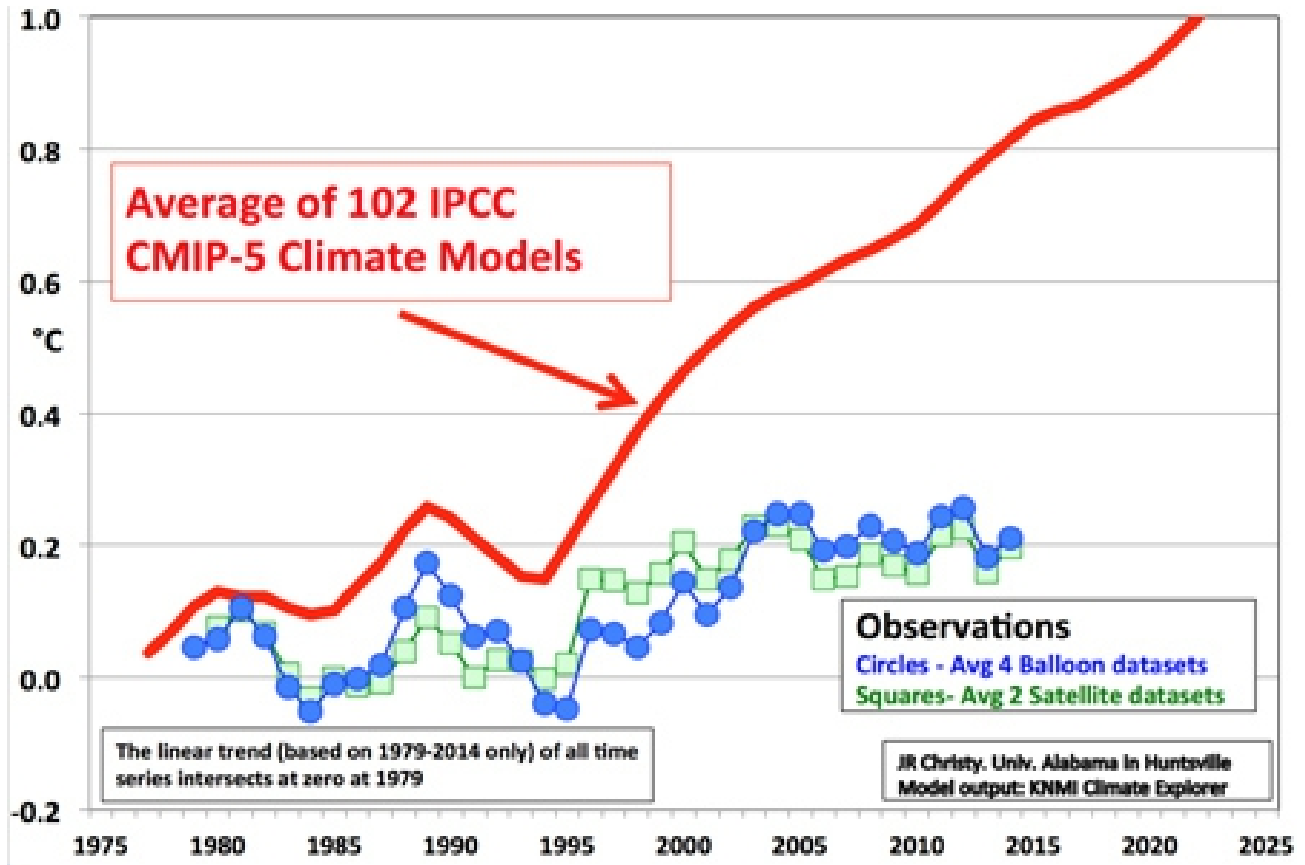


Figure 3. Comparison of 102 United Nations Intergovernmental Panel on Climate Change Climate Models with robust empirical temperature data (Satellite and Radiosonde Balloon data) for the tropical mid-troposphere. (Source: John Christy, University of Alabama Huntsville)