

## **Oregon Institute of Science and Mularkey**

This is what Realclimate calls the Oregon Institute of Science and Medicine. This outfit has launched one of the greatest contrarians propaganda blitzes of all time. They did it first in 2003 or 2004, then rewrote it and did it again in 2007. They sent their letter to 10s of thousands of engineers and supposedly have had 19,000 sign it. After reading the letter, I find that hard to believe, unless the scientists all have their degrees in anthropology or biology.

The paper is quite convincing, unless one knows a few things about climate science – then their errors are blaring. Realclimate.org has done a second, shorter piece on the letter here <http://www.realclimate.org/index.php?p=480>

The Petition Project is here: <http://www.oism.org/pproject/s33p36.htm>

The paper behind the project is here: [Oregon Institute of Science and Medicine](#)

This is the Home Page for the Oregon Institute of Science and Medicine: <http://www.oism.org/>  
A trip here is required to fully understand the motivation behind these guys.

The following are my notes on this letter:

Chart 1: 98% of ALL glaciers are retreating. in 1900, this was not the case. In the 1800s there were major advances in most glaciers across the world during the Little Ice Age.

Chart 2: Regional temperature fluctuations are one of the standard ploys used by the contrarians to try and define climate change in terms of local weather. The Sargaso Sea is a huge place in the Southern North Atlantic, but what counts is global average. The surface of the Earth is 200 million square miles, the Sargaso sea is 1% of this.

Chart 3 - Solar Irradiance: Earth's temperature is likely driven by very small changes in solar insolation (irradiation is used here in a non-standard way), the science is just not sure yet. The wild resulting swings of Earth's temperature are caused by chaotic (not random) feedback mechanisms that are produced by changes in solar insolation. These changes can be described by Solar insolation cycles (changes in the sun's intensity), obliquity - the obliquity of Earth's rotation around the sun (the roundness of its orbit) and precession - the tilt of the Earth's rotational axis. Taken together these cycles are commonly known as Milankovitch Cycles. They generally occur at 100,000, 40,000 and 23,000 year cycles. Oddly, the 100,000 year ice age cycles are caused primarily by obliquity - when the Earth's obliqueness is greater, greater summer heat melts more of the winter ice and the ice albedo feedback mechanism is greater (reflectivity of ice), leading to a greater planetary warming than just the increase in insolation that the change in obliqueness of the orbit would suggest. Also, possibly the most important issue with this graph - Earth's climate lags the greater part of CO2 emissions. Looking at this graph from that perspective, I see a definite correlation. It may not be valid statistically, but from the content of this paper, there is no way to tell if what is shown in this graph is statistically

valid either.

Chart 4 - US Temp Trends: Another attempt to persuade the reader that regional weather is associated with global climate. What they get dead wrong here is the meaning of this data set.

These data are very widely accepted as being caused, first the increasing temps by natural and anthropogenic changes to our atmosphere between the turn of the century and the 1940s, then the decreasing temps by aerosol pollution from developed countries mainly the US, then by the near immediate effects of the decrease in aerosol pollution after the Clean Air Act was introduced by Nixon in 1970. And the curve is turning up at the end, as in an asymptotic or exponential (increasingly increasing) relationship. What's worse, China and India are working hard on curbing their aerosol pollution. This problem is widely seen as masking even greater global heating. The cure for aerosols is relatively easy. The U.S. did it in less than 10 years. The effects of decreasing aerosols are seen almost immediately in the atmosphere as their half life is about two weeks. They tend to rain out easily, or just settle by gravity as in atmospheric deposition, allowing the masking effect they have on warming to rapidly disappear.

Chart 5 - Ditto number 4. One cannot infer global climate change by looking at regional weather patterns!

Chart 6 - I have seen two or three papers that show with higher resolution that storminess is increasing in the US (which is again, another attempt to define climate through regional weather). This graph is an attempt to show that increased storminess means an increase in precipitation. It does not. What is happening is that we are getting a near average amount of precipitation; only it is being distributed much differently. Higher intensity storms in shorter durations, and changing precipitation patterns mean in this case that dryer areas are getting dryer (continental areas mostly) and wetter areas are getting wetter.

Chart 7 - Solar irradiance and US Temp - That's a surprisingly good fit for that curve, one that I have not seen. I don't see any appropriate statistics and the reference. The private communication (*19*) *Soon*, is unclear, unverifiable and nonstandard procedure.

Chart 8 - Tornadoes: I have not studied tornadoes a great deal, but I do believe that we are in the above average area somewhere. I also know that tornado season is widening. We are seeing more tornadoes earlier and later in the season.

Chart 9 - Hurricanes: I am up on hurricanes. The driving force behind the anti-climate change / hurricane intensity relationship is Drs. Christopher Landsea and William Gray. These two have beat back the majority scientific consensus that anthropogenic change has indeed increased the production of high intensity hurricanes globally. And there are many, many more scientists that believe this than the contrary view. When one applies a shorter average time period to their data, you in-fact DO get an increasing trend in the number of land falling Atlantic hurricanes. - look at the data points. What they have done here is use an extra long average return period to flatten out what should be an upturned curve in the later end of the data series.

Chart 10 - Global sea level increase vs. SST vs. atmospheric CO<sub>2</sub>. The oceans translate heat into sea level rise even more slowly than the 30-year plus climate lag. If we stopped heating the

planet today, there is enough latent heat in the ocean already, that it will take 300 to 1,000 years for the ocean water to complete its thermal expansion upon complete ventilation or mixing (remember, it takes the great thermohaline circulation 1,000 years to make one revolution around the planet). Dr. Konrad Steffen, one of the scientists that I met in Greenland, said that melt processes in the Arctic, in the last 10 years have proceeded an order of magnitude faster than have been predicted by the vast majority of climate models. That was in 2005. What we have seen in the Arctic (and the Antarctic) is exponential increases of melt rate and ice discharge (ablation). This roughly means that sea level is increasing 10 times faster than before, or faster than predicted by the climate models. The theory that the Antarctic ice balance is increasing, which has widely been seen in climate models as a warmer planet increases the precipitation rate on Antarctica - has been shown in the last 3 to 5 years to be wrong. The Antarctic ice balance is now going negative, mostly due to greatly increase edge ablation and glacial discharge.

And that's all the time that this article gets from me.