

Let it Snow!

As the evidence continues to mount against climate alarmists, their statements continue to become more outrageous. Those like Dr. John Holdren now call for the education of skeptical scientists [1] as if skepticism about human induced climate change equates with a lack of understanding about the climate change problem. Then, when former Vice President Al Gore [2] was challenged about the cold and snow gripping much of the United States, he explains how science has always held out that human induced climate change is leading to more snow. This is a new wrinkle in the climate change debate as many press releases from alarmists during the past ten years discussed how snow might become a thing of the past.

But could it be that the alarmists are the ones who need education about how the climate system works? Low pressures, like the one that brought record snows from the southern plains states to the Chicago area (February 1-2, 2011), draw their energy primarily from the strength of the equator-to-pole temperature differences. They are also driven by the stability of the atmosphere, or how quickly temperatures decrease with height. Finally, another key ingredient can be the addition of copious amounts of moisture. However, the moisture will not make storms stronger without the contributions of the other two processes.

Global warming alarmists continually argue that the warming is happening fastest in the arctic regions and that an upper tropospheric warming would be a key signature of human induced climate change [3]. Both of these factors would act to reduce the strength of storms, and also result in a jet stream that tends to be less “active” and with less robust waves.

Early last fall, it became apparent that the eastern United States would have a colder than normal winter [4]. The previous year’s El Niño had waned and La Niña was setting in during the early fall. Additionally, sea surface temperatures in the Northern Pacific were getting warmer. Both of these scenarios favor the occurrence of more winter season blocking [5] in the Pacific Sector. Blocking is a large-scale, mid-latitude, persistent ridging in the jet-stream which “blocks” the regular progression of storms [5]. Blocking in the Pacific is usually associated with cool weather in the central and eastern USA [6]. The deepening La Niña has brought global temperatures down during December 2010 and January 2011 [7] (Fig. 1).

For the second straight year, snow is piling up across much of the country including the Missouri region. In our area, the recent storm was the second greatest snow producer in at least the last 60 years. For Columbia in central Missouri, the winter of 2010-2011 has produced already the 6th greatest winter seasonal snow total since 1890. And February has just begun. The snow totals here have been noteworthy in other ways as January 2011 was the 9th snowiest on record, February 2011 is already the 4th snowiest. This winter season is only the third one since 1949 to produce three events of 6-or-more inches at our location.

While snow has assaulted the record books in Missouri as well as nationwide, the cold temperatures have yet to become a big story. The winter temperatures in our region are on pace to be colder than last year, which was our 15th coldest on record (since 1890), and this year’s winter would rank at 10th if February does not change the winter average appreciably. So far February has been off to a cold start, and the narrative has been the same elsewhere. None of

these things are consistent with what we would expect in a warmer world as the alarmists see it [3], regardless of how they spin it [2].

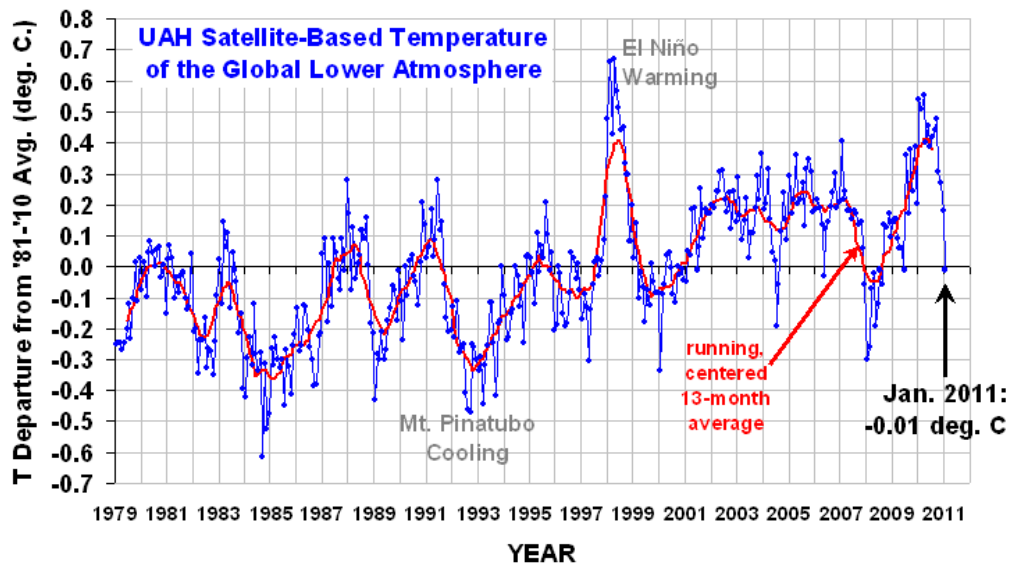


Figure 1. The global temperature anomalies based on satellite measurements from the University of Alabama Huntsville. The abscissa shows years since 1979 and the ordinate is temperature anomalies in degrees centigrade. Adapted from [7].

[1] <http://www.theblaze.com/stories/science-holdren-on-climate-change-skeptics-it-is-an-education-problem/>
Posted: January 31, 2011.

[2] http://blog.algore.com/2011/02/an_answer_for_bill.html Posted: February 1, 2011

[3] *Climate Change 2007: The Science of Basis, Contributions of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Edited by: S. Solomon, D. Qin, M. Manning, M. Marquis, K. Averyt, M.M.B. Tignor, H.L. Miller, Jr., and Z. Chen. Cambridge University Press, Cambridge, UK. 996 pp. ISBN: 978 0521-70596-7

[4] <http://solberg.snr.missouri.edu/gcc/> See "Our Long Range Forecast" link.

[5] Wiedenmann, J.M., A.R. Lupo, I.I. Mokhov, and E. Tikhonova, 2002: The climatology of blocking anticyclones for the Northern and Southern Hemisphere: Block intensity as a diagnostic. *Journal of Climate*, **15**, 3459-3473

[6] Lupo, A.R., E. P. Kelsey, D.K. Weitlich, N.A. Davis, and P.S. Market, 2008: Using the monthly classification of global SSTs and 500 hPa height anomalies to predict temperature and precipitation regimes one to two seasons in advance for the mid-Mississippi region. *National Weather Digest*, **32:1**, 11-33.

[7] Spencer, R, 2011: <http://www.drroyspencer.com/2011/02/uah-update-for-january-2011-global-temperatures-in-freefall/>