

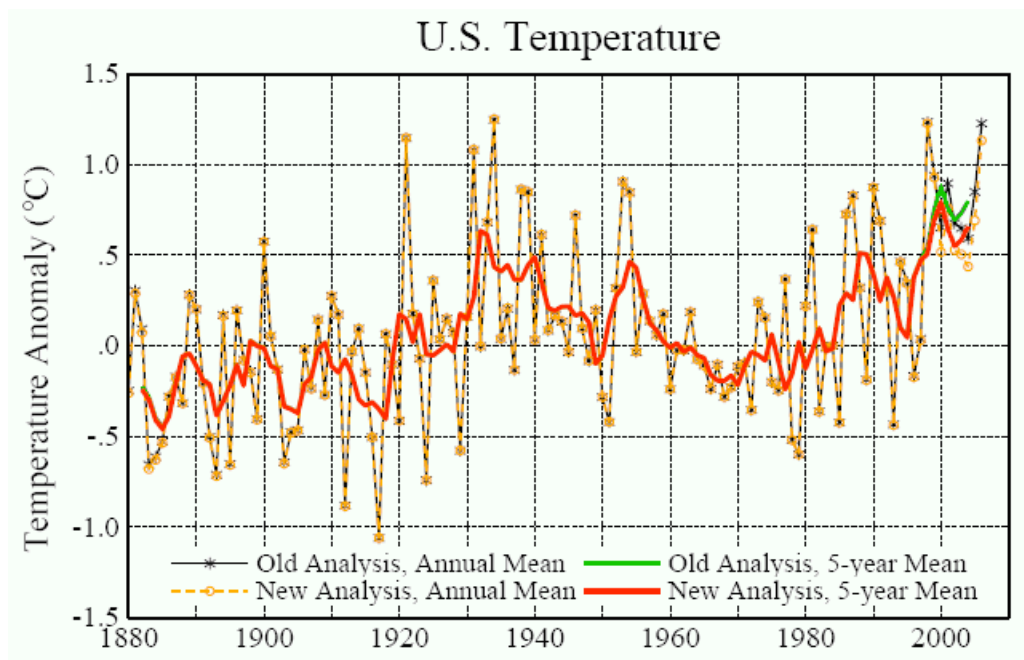
## A Light On Upstairs?

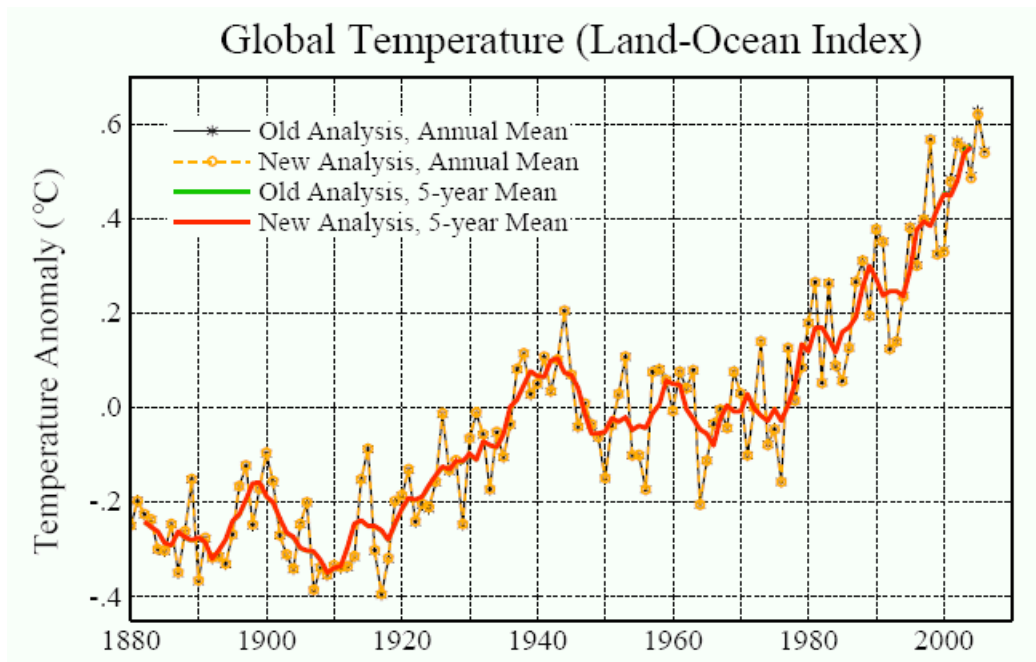
Sorry to send another e-mail so soon. No need to read further unless you are interested in temperature changes to a tenth of a degree over the U.S. and a thousandth of a degree over the world.

Recently it was realized that the monthly more-or-less-automatic updates of our global temperature analysis ([http://pubs.giss.nasa.gov/abstracts/2001/Hansen\\_etal.html](http://pubs.giss.nasa.gov/abstracts/2001/Hansen_etal.html)) had a flaw in the U.S. data. In that (2001) update of the analysis method (originally published in our 1981 Science paper – [http://pubs.giss.nasa.gov/abstracts/1981/Hansen\\_etal.html](http://pubs.giss.nasa.gov/abstracts/1981/Hansen_etal.html)) we included improvements that NOAA had made in station records in the U.S., their corrections being based mainly on station-by-station information about station movement, change of time-of-day at which max-min are recorded, etc.

Unfortunately, we didn't realize that these corrections would not continue to be readily available in the near-real-time data streams. The same stations are in the GHCN (Global Historical Climatology Network) data stream, however, and thus what our analysis picked up in subsequent years was station data without the NOAA correction. Obviously, combining the uncorrected GHCN with the NOAA-corrected records for earlier years caused jumps in 2001 in the records at those stations, some up, some down (over U.S. only). This problem is easy to fix, by matching the 1990s decadal-mean temperatures for the NOAA-corrected and GHCN records, and we have made that correction.

The flaw did have a noticeable effect on mean U.S. temperature anomalies, as much as  $0.15^{\circ}\text{C}$ , as shown in Figure 1 below (for years 2001 and later, and 5 year mean for 1999 and later). The effect on global temperature (Figure 2) was of order one-thousandth of a degree, so the corrected and uncorrected curves are indistinguishable.





Contrary to some of the statements flying around the internet, there is no effect on the rankings of global temperature. Also our prior analysis had 1934 as the warmest year in the U.S. (see the 2001 paper above), and it continues to be the warmest year, both before and after the correction to post 2000 temperatures. However, as we note in that paper, the 1934 and 1998 temperature are practically the same, the difference being much smaller than the uncertainty.

Somehow the flaw in 2001-2007 U.S. data was advertised on the internet and for two days I have been besieged by rants that I have wronged the President, that I must “step down”, or that I must “vanish”. Hmm, I am not very good at magic tricks.

My apologies if the quick response that I sent to Andy Revkin and several other journalists, including the suggestion that it was a tempest inside somebody's teapot dome, and that perhaps a light was not on upstairs, was immoderate. It was not ad hominem, though.

Jim