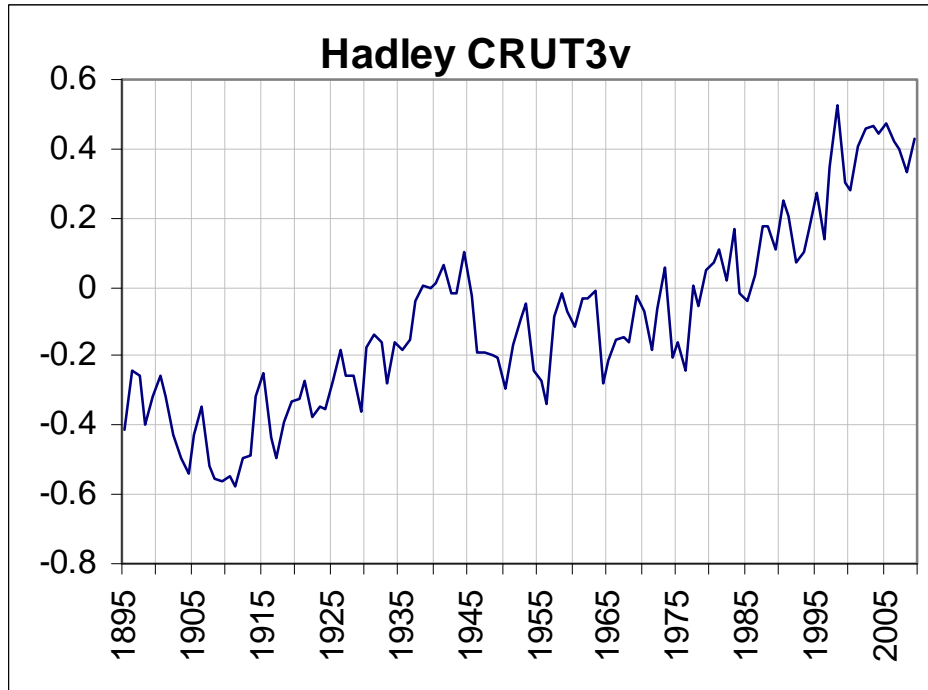


## CHASING A MORE ACCURATE GLOBAL TREND

By Joseph D'Aleo, CCM, AMS Fellow

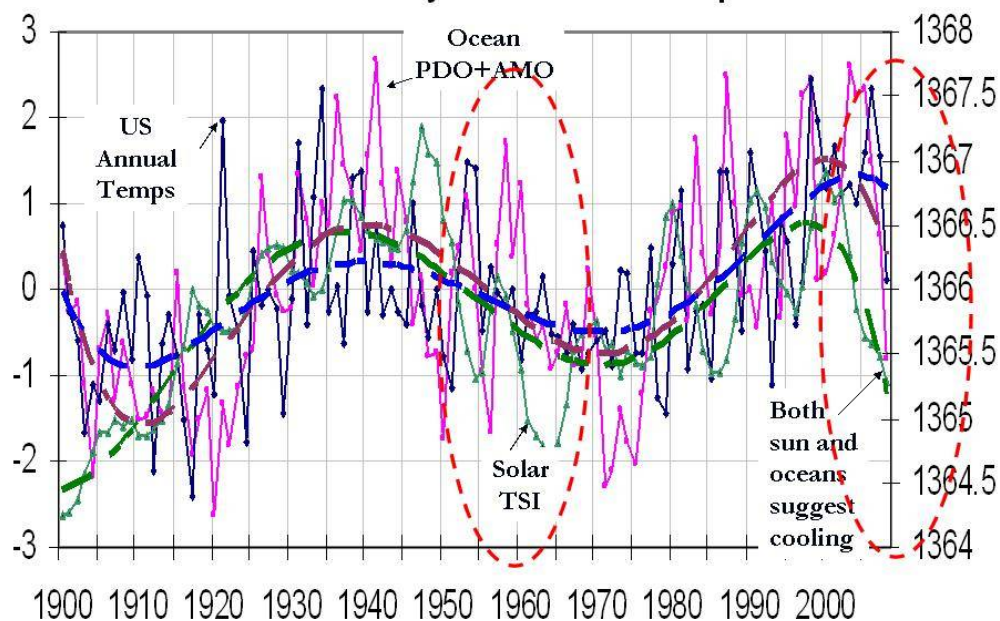


Hadley Center Global Annual Mean Temperature since 1895 shows a warming of about 1C the last century.

The long term global temperature trends have been shown by numerous peer review papers to be exaggerated by 30%, 50% and in some cases much more by issues such as urbanization, land use changes, bad siting, bad instrumentation, and variable ocean measurement techniques that changed over time. NOAA made matters worse by removing the satellite ocean temperature measurement which provided more complete coverage and was not subject to the local issues except near the coastlines and islands. The result has been the absurd and bogus claims by NOAA and the alarmists that we are in the warmest decade in 100 or even a 1000 years or more. See this [earlier story](#) that summarizes the issues.

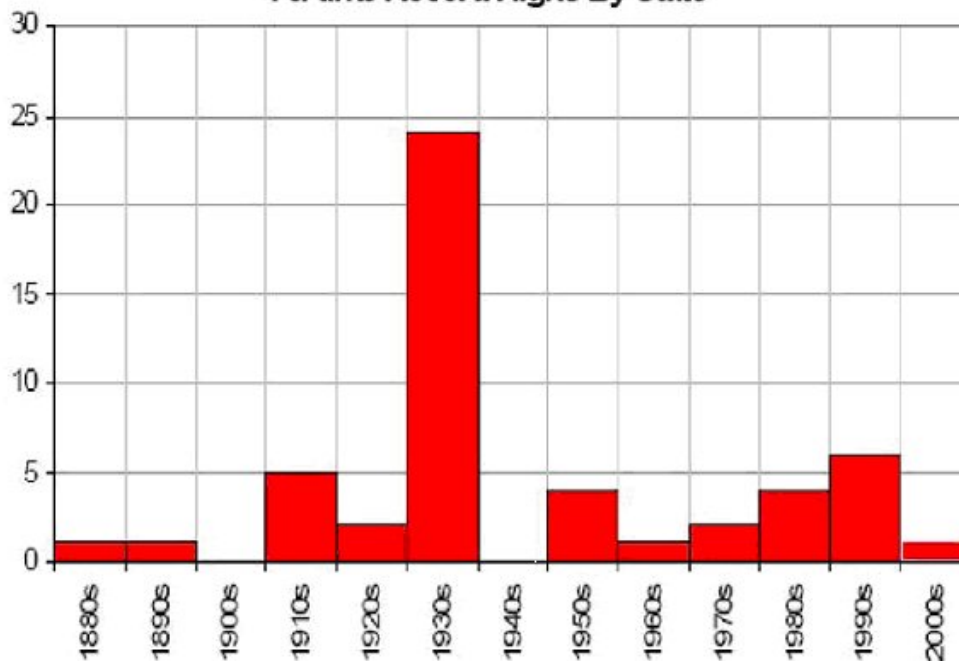
No one disputes the cyclical warming from 1979 to 1998 that is shown in all the data sets including the satellite, only the cause. These 60-70 year cycles tie in lock step with the ocean temperature cycles and solar Total Solar Irradiance. The annual mean USHCN temperatures are shown below along with the annual TSI and PDO+AMO.

## Sun and Ocean Cycles Versus Temperatures

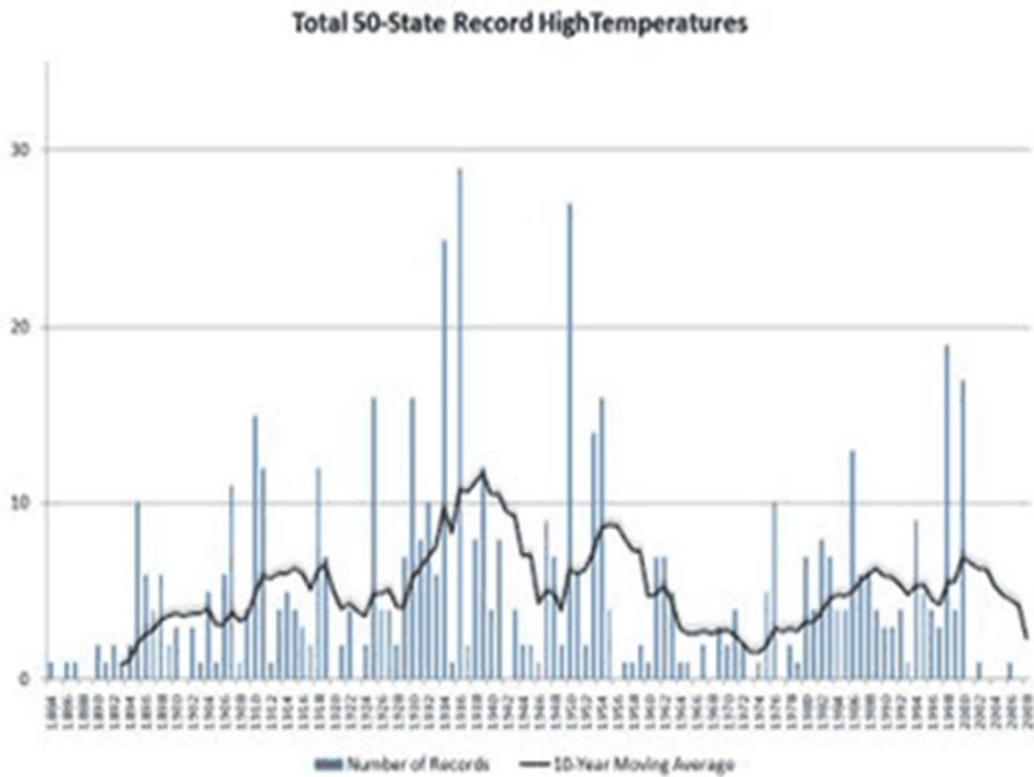


One needs simply to look at the record highs for the United States and Globe to see that the warmest years are not all in the last two decades (although some were to be expected given it is one of two peaks in the cycles). The first image below shows the decadal state record all-time highs. The 1930s still clearly dominates (24 state all time records) with only one state (South Dakota) in the 2000s tying a 1930s all-time heat record.

## All-time Record Highs By State



The following image shows the record monthly highs by individual year. Note the 1930s and 1950s dominate and this decade showing the least record highs than any decade since the 1800s.

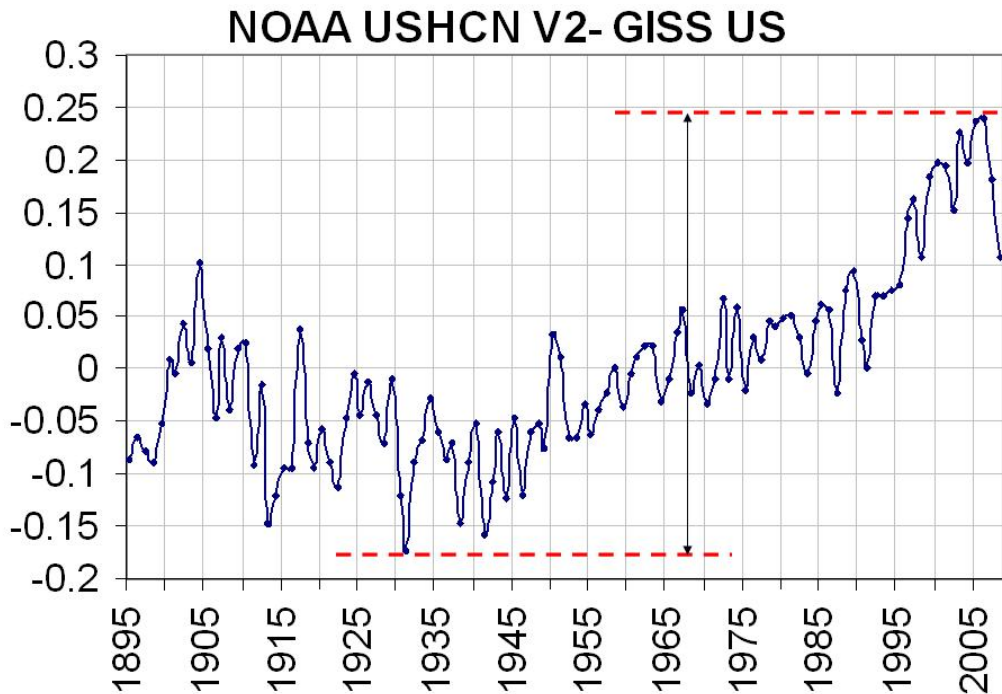


Here is the NCDC compilation of the continental all-time records (enlarged [here](#)), note for all the populated continents, the records were in the 1800s and early 1900s.

<b><i>Continent</i></b>	<b><i>All-time High</i></b>	<b><i>Place</i></b>	<b><i>Date</i></b>
Africa	136	El Azizia, Libya	September 13, 1922
North America	134	Death Valley, CA	July 10, 1913
Asia	129	Tirat Tsvi, Israel	June 22, 1942
Australia	128	Cloncurry, Queensland	January 16, 1889
Europe	122	Seville, Spain	August 4, 1881
South America	120	Rivadavia, Argentina	December 11, 1905
Oceania	108	Tuguegarao, Philippines	April 29, 1912
Antarctica	59	Vanda Station, Scott Coast	January 5, 1974

### ***TRYING TO GET AT A BETTER LONG TERM TREND***

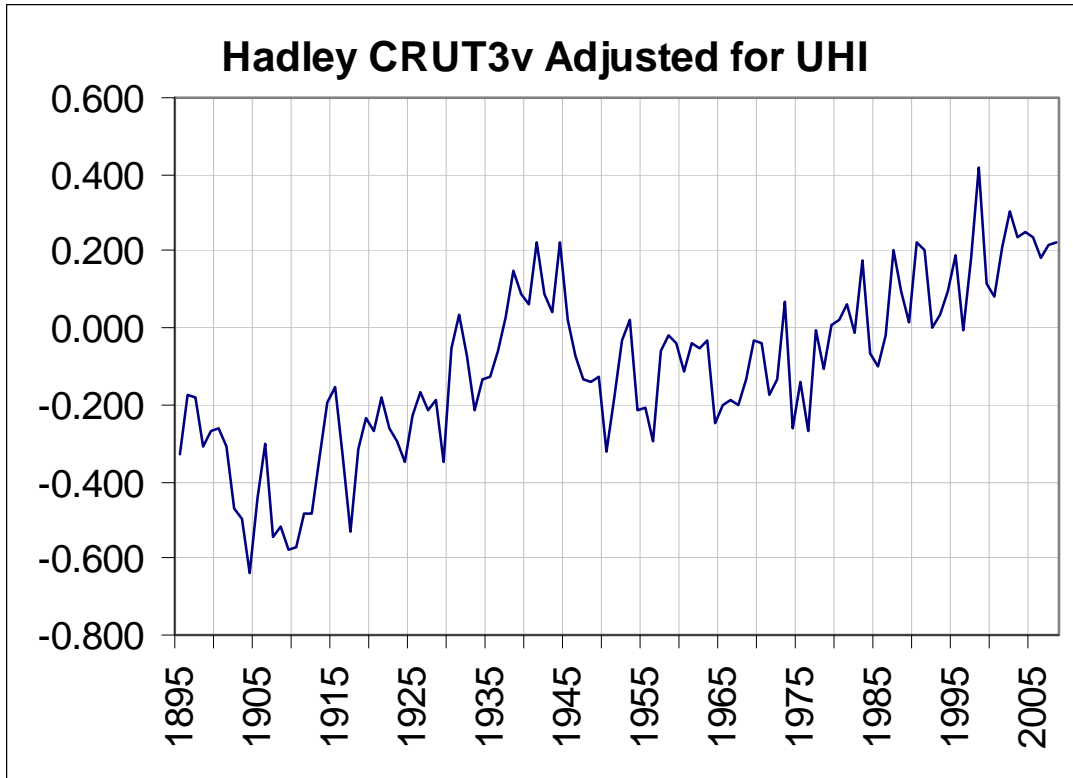
NCDC removed the UHI effect for the US in 2007 in version 2 of the USHCN. GISS maintains their version of a UHI adjustment of this NCDC USHCN data using satellite night lights. By differencing the two, I found the following:



It shows an artificial warming of about 0.45C almost 0.75F for the NOAA data for removal of the urbanization adjustment. Phil Jones of the Hadley Center, co-authored a paper that showed the UHI contamination of China was 1 degree Celsius (1.8F) for the century, so this contamination appears not to be unreasonable.

Unfortunately they did not use lights globally and Steve McIntyre has shown the NASA adjustments for UHI are as often down as up.

The Hadley Data set is used by the IPCC and makes no attempt to adjust for UHI. I took that UHI adjustment for the United States and subtracted it from the annual Hadley CRUT3v global temperatures. Hadley global data is mainly land with ocean temperature data from ships mainly in heavily traveled northern hemispheric routes. Here is what Hadley says about its marine data “*For marine regions sea surface temperature (SST) measurements taken on board merchant and some naval vessels are used. As the majority come from the voluntary observing fleet, coverage is reduced away from the main shipping lanes and is minimal over the Southern Oceans.*” I got the following:



This gives a much more believable view of global temperatures, consistent with the natural forcings and records shown. It shows what GISS showed for the United States, warmest years dominated by the 1930s and 1940s and again the 1980s to early 2000s. The most rapid warming occurred in the early twentieth century. The net change from the 1930s and 1940s maximum to the 1990s early 2000s maximum was negligible (less than 0.2C). It suggests much to do about nothing in DC and Copenhagen.