

The US Temperature Record 1: Where is the data?

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I want to examine the US temperature record honestly. We've all seen the "hockey stick" plot of temperatures. Is it real? I'm a scientist, which means there is a part of me that never believes anything I'm told. I want to know for myself. I hate being dependent on *believing* science. Like a religion. I've already got one, thanks. I'm not keen to adopt any others.

The US climate data repository is kept at the United States Historical Climatology Network (USHCN), <https://www.ncdc.noaa.gov/ushcn/data-access>. It's kept by National Oceanic and Atmospheric Administration (NOAA), and administered by the National Climatology Data Center (NCDC).



The Network is a set of just under 2000 weather stations which were started back in the Civil War times and added to into the 1950's. All were initially sited well, which means a well-ventilated box above the ground over a grassy field with no structures nor pavements nearby to influence the temperature readings. The thermometers they used were recording thermometers, a U-shaped tube with a bulb at the top of one arm with mercury at the bottom, and small bits of plastic riding on the top of the two arms of mercury. When the temperature went down, gas inside the bulb would contract and draw the mercury up that side, and leave the plastic bit clinging to the glass at its high point representing the coldest temperature of the day. When hot the gas expands, pushing the mercury up in the other column, leaving it's bit of plastic high and dry at the hottest part of the day. Someone come out each day to record the hottest and coldest temperature, then knocks the bits back down by tapping the thermometer. Each month the highs and lows are averaged, and the monthly average is calculated. For most purposes, the monthly average is all that is needed to see general weather trends. The USHCN is a list of the average monthly high, low, and daily average temperatures for each station. It also includes precipitation totals for each month.

If you followed the link above, you'll find the link to the FTP site where the data is kept (<https://www.ncei.noaa.gov/pub/data/ushcn/v2.5/>) where you'll be confused. What's up with all those different temperature sets? That's in [part 2](#).



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