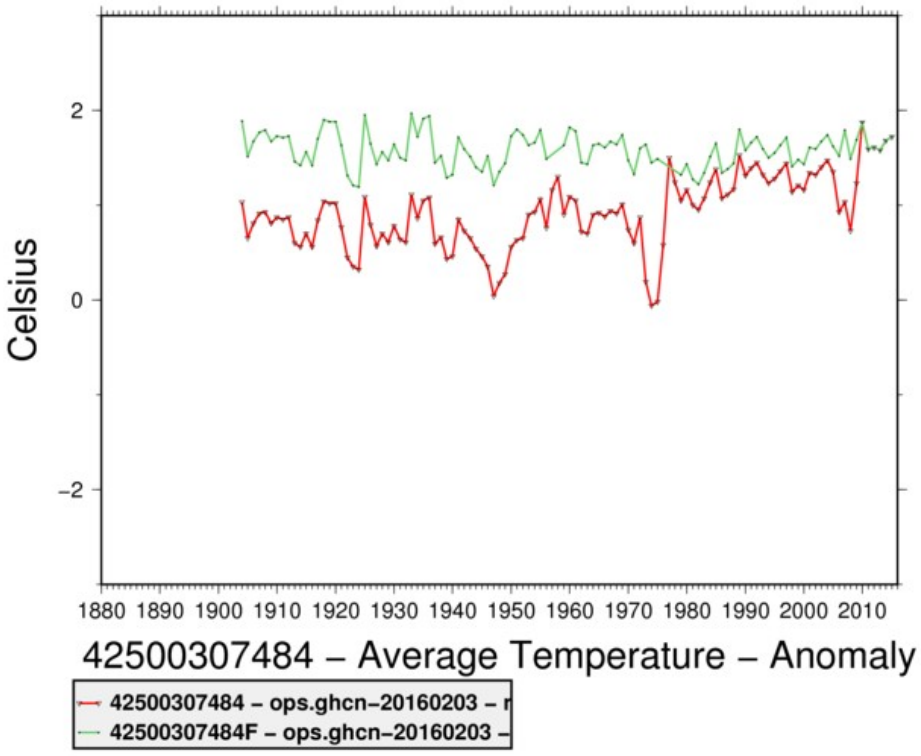
Readme file for Stn-vs-Net Plots
1 September 2010
Updated 17 May, 2016

Stn-vs-net plots display differences between the GHCNMv3.3.0 annual average temperature for a station and the annual average temperature of its neighboring stations. The number of neighbors is determined by the most well correlated stations within a radius of about 1500 kilometers. A maximum of 20 stations are used for the calculation of a surrounding network average temperature. The annual average temperature for the station as well as its neighbors is calculated individually as an "anomaly", a departure from its average when the neighbor overlaps the primary station.

These plots contain two lines: one showing the difference in temperature between the station and its neighbors using unadjusted data (red) and another line showing the difference in temperature between the station and its neighbors using adjusted data (green). The x-axis shows the years (typically 1880-2015) and the y-axis is the difference between the average temperature series for the station minus the average of the surrounding neighbors.



The above image displays GHCNMv3 station 4250037484 average annual anomaly differences to the average of the 20 nearest neighbors. The red

line (which is covered by the green line from the 2010 to present), shows the raw series temperature difference from its neighbors, and the green line show the difference with its neighbors following adjustment to remove the effects of artificial (non-climatic) influences such as station moves and changes in observer practice or observing technology. The offset of the red line indicates this station, btween 1979 and 2009 was about 0.25°C cooler than current measure measurements and before 1976 about 1.0°C cooler. Following adjustments to this station, the green line reveals it is consistently about 1.75°C warmer than its neighbors throughout its 100+ year life. The adjustment was necessary to remove the influence of a non-climatic change (e.g., a station move or change in instrumentation) that resulted in a change in temperature unrelated to a true change in climate. The period of record trend has been reduced by about 1.0°C per century.

Note: the years 1977-1978 were removed because the detected inhomogeneities made a segment too short to determine a reliable adjustment.