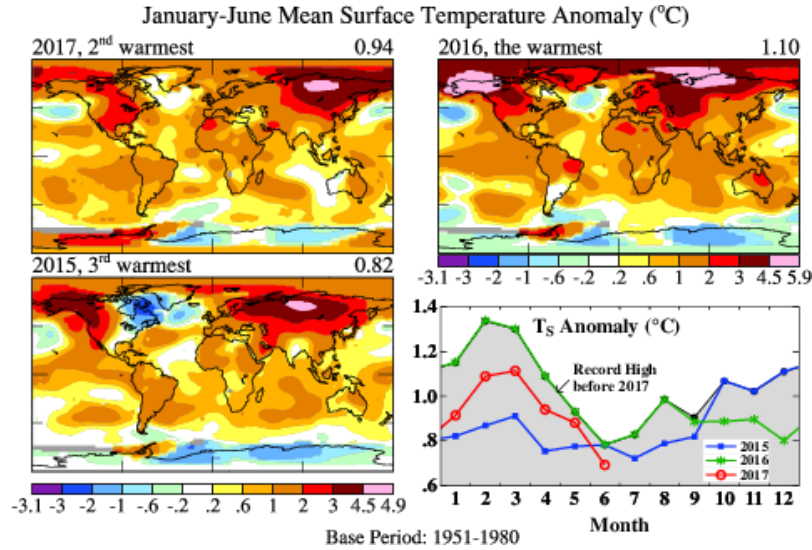


June 2017 Global Temperature Update

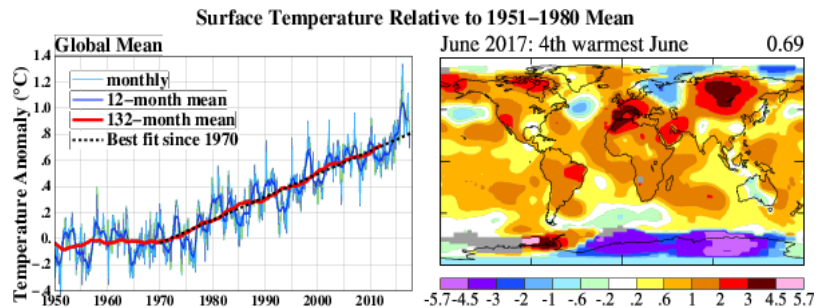


For the half year January-June, 2017 is the second warmest, about halfway between the warmest (2016) and the 3rd warmest (2015).

Global temperature dropped sharply between May and June this year, as shown by the red curve in the lower right part of the first chart. That sharp drop is also apparent in the line graph in the second chart, where, for the first time since 2014, the monthly temperature anomaly dropped well below the trend line.

The map for the June 2017 temperature anomaly (right side of the second chart) reveals that the sharp drop in global temperature was due substantially to an unusually cold Antarctica*. Antarctic temperature in winter months has very large natural variability, so there is no reason to expect that cold anomaly in Antarctica to continue.

However, returning to the line graphs in the lower right of Chart 1, we note that it is unlikely that the second half of 2017 can match the warmth of the second half of 2015. The second half of 2015 was affected by a building strong El Nino. In contrast projection, NOAA projections for the second half of 2017 (chart of http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf) have declining SSTs in the tropical Pacific. So it is possible that the 2017 annual mean temperature may fall closer to the 2015 annual mean.



*Note that the rectangular latitude-longitude projection of our maps exaggerates the size of polar anomalies. Other projections can reduce or remove area bias. We prefer the rectangular projection because it allows more accurate location of features. Compressing polar regions in alternative projections produces lots of blank area on the page and loses spatial resolution in the polar region.