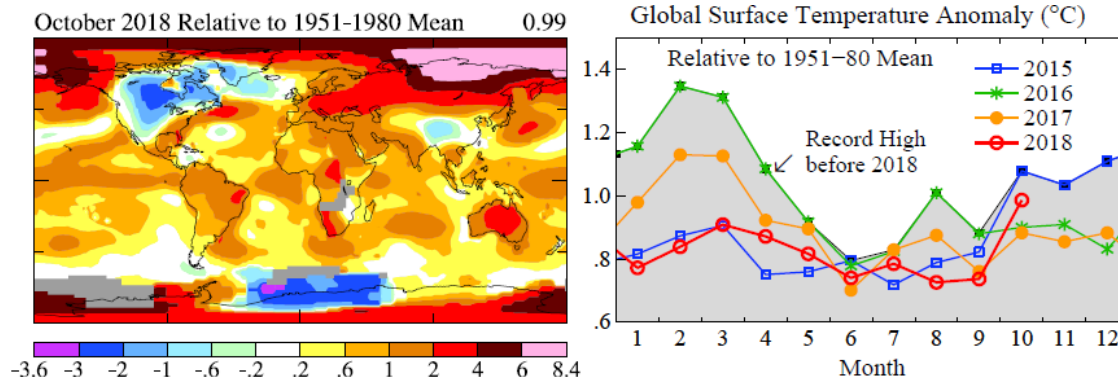


# October 2018 Global Temperature Update



October 2018 was the second warmest October since 1880. At  $+0.99^{\circ}\text{C}$  (relative to 1951-1980) it trailed only October 2015 ( $+1.08^{\circ}\text{C}$ ).

Extreme regional temperature anomalies in the Northern Hemisphere (see map), as much as  $+6-8^{\circ}\text{C}$  in Siberia and minus  $2-3^{\circ}\text{C}$  in North America were evidently related to a wind anomaly carrying warm air in a northeasterly direction across Asia, with the balancing flow bringing Arctic air into North America.

Global temperature is beginning to rise as the tropical Pacific is in the early phase of an El Niño, only three years after the prior one. It will be interesting to compare global temperature in coming months with 2015-16 temperatures (blue curve in the above figure for the rest of this year, then the green curve).

The record 2016 global temperature got a maximum boost from the Sun as 2016 was 1-2 years after [Solar Maximum](#). In contrast, 2019 will be during a deep Solar Minimum.

The record 2016 global temperature was boosted mainly by a 'Super El Niño', at least as judged by the usual Niño3.4 index, which matched or exceeded the 3.4 index for the 1997 Super El Niño. We note, however, that recent high 3.4 indices (the 3.4 index is the temperature anomaly in a small region in the tropical Pacific) may be partly a result of a background global warming trend.

So it will also be interesting to see how strong this El Niño will be. It may be that apparent El Niño strengths are boosted by global warming.

