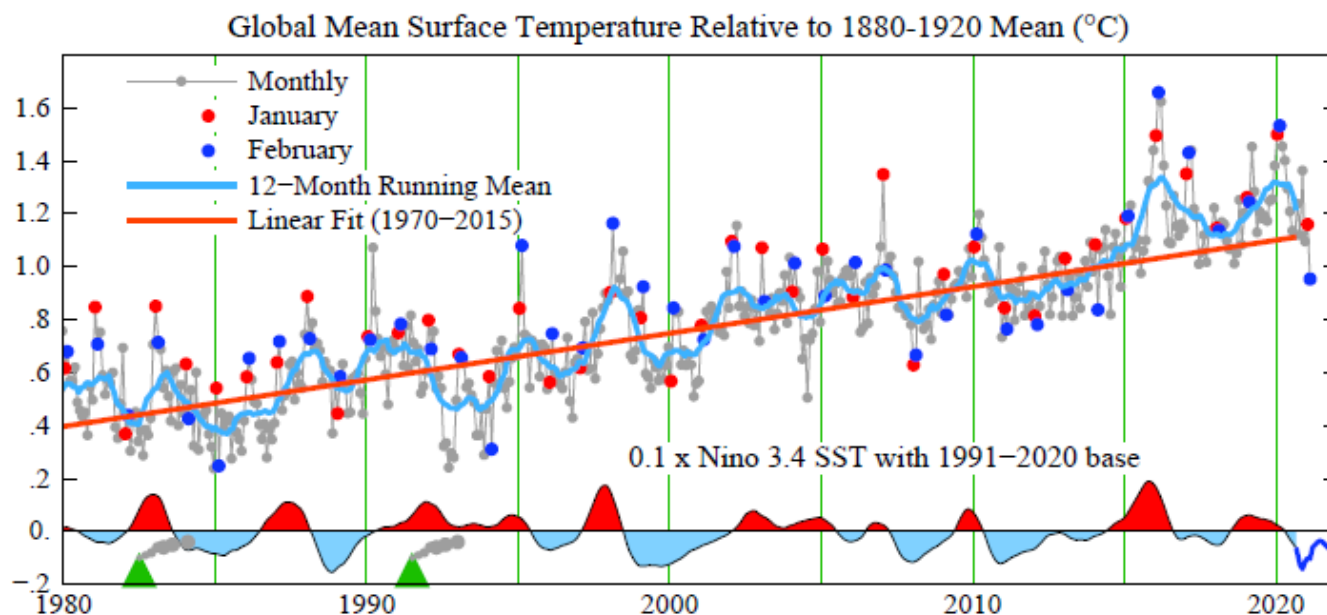


February 2021 Global Temperature Update



Global temperature in February 2021 took a dive to $+0.95^{\circ}\text{C}$ relative to the 1880-1920 base period. It was the 14th warmest February in the 1880-2021 period. Four Februaries in 2011-2014 were colder.

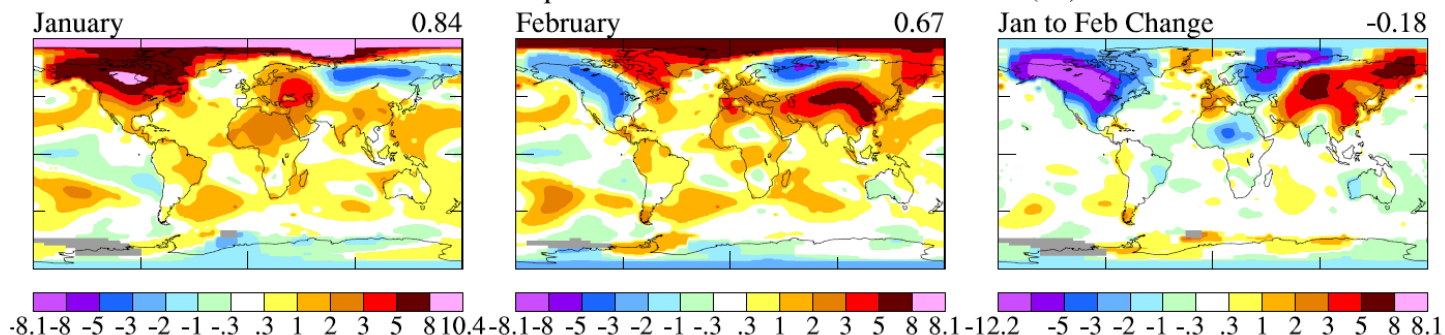
As we noted last month, this La Nina year will provide some indication of whether the apparent acceleration of global warming in 2016-2020 is real. The linear trend line (the red line) reaches 1.5°C in the early 2040s. However, if there is a real acceleration of global warming, 1.5°C average temperature could be reached by 2030.

The relevant quantity to watch is the 12-month running mean – the blue curve. It will decline further in the next two months because of the high global temperatures in March and April 2020, but the question is: how far?

Solar irradiance is the largest cause of sub-decadal climate forcing variability among measured forcings (aerosols being unmeasured). Solar cycle minimum was reached in 2019, which yields maximum cooling effect now, due to a 1-2 year lagged response. So, if the 12-month mean does not fall much below the red trend line, it suggests that there is a real warming acceleration that could implicate an aerosol reduction (see [earlier communication](#)).

Below are global maps of temperature anomalies for January and February 2021. Most of North America experienced a remarkable swing from an unusually warm January to an unusually cool February. Record-breaking cold in the central United States had disastrous impacts, especially in Texas.

Surface Temperature Relative to 1951-1980 Mean ($^{\circ}\text{C}$)



Sign up for our Monthly Temperature Updates [here](#).

Sign up for our other Communications [here](#).