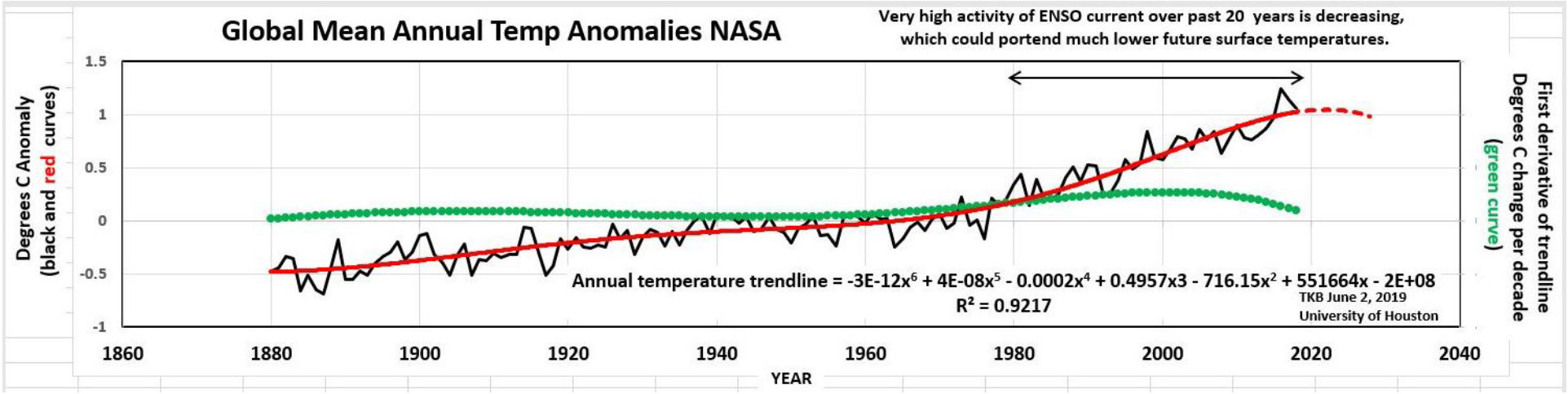
Everyone's Handy Tool for Predicting Future Global Surface Temperatures



Comments on Analyses of Global Mean Annual Surface Temperature Anomalies

1. The black curve represents the NASA Goddard Institute for Space Studies global-mean annual land and sea surface temperature anomalies, 1880-present. Anomalies are deviations from the 1951-1980 annual mean temperatures in degrees Centigrade. The red curve represents the trendline equation and is a sixth-degree polynomial or line of best fit generated by the Microsoft Excel multiple regression tool. The green curve is the first derivative of the red curve converted to units of degrees Centigrade per decade. The red-dashed curve is a mathematical projection of the trendline equation from 2018 to 2030. Whether this prediction is likely is for the reader to decide. Estimate a possible future temperature by picking a value on the red-dashed curve and adding 14^{o} Centigrade to the value to calculate a future average surface temperature of the earth.
2. The rate of increase of the trendline temperature in 2018 was 0.096 degrees C per decade. This is the lowest rate of warming of the surface of the earth since 1968, some 50 years ago. This decrease in warming began around 2001 and has dropped every month since then, nearly one percent every 3 months for 18 years, despite the transient warming effects of the past 20 years due to very high activity ENSO currents in the Pacific Ocean
3. A similar analysis of the HadCRUT4 global-mean monthly land and sea surface temperature anomalies, 1900-present, yields remarkably similar results. Modern climate temperature data herald a Goldilocks future for the planet, temperatures that are neither too cold nor too hot. Caltech recently announced the start of a 5-year project with several other research centers to build a new climate model from the ground up. During this time frame, the world's understanding of the causes of climate change should be greatly improved by the Caltech project and many other similar projects. A compelling case can be made to not launch grandiose projects to change the future climate until the understanding of the climate process is adequate to guide such important decisions. Climate research is not yet at that point. We have the time to get it right.