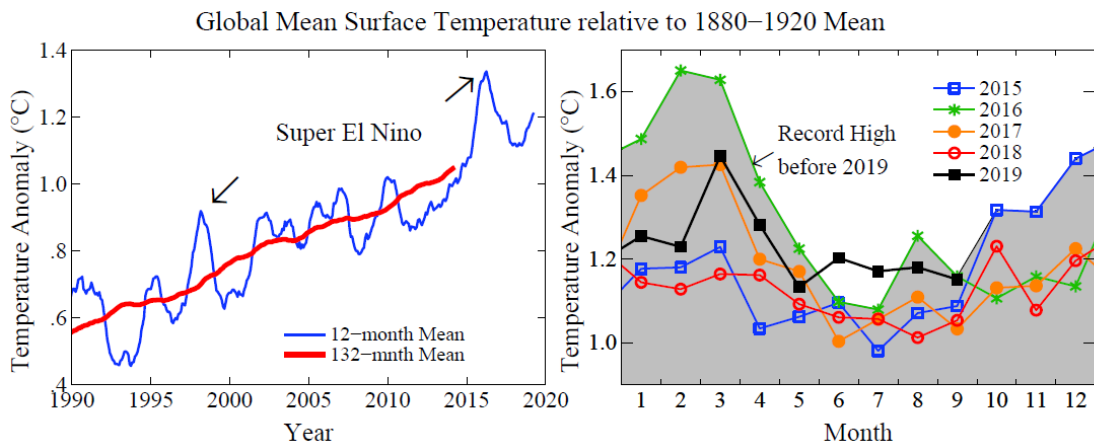


September 2019 Global Temperature Update



September 2019 was $+0.90^{\circ}\text{C}$ relative to 1951-1980 or $+1.15^{\circ}\text{C}$ relative to 1880-1920, making it the second warmest September since 1880, when measurements of adequate accuracy and spatial coverage began; 2016 was warmer at $+1.16^{\circ}\text{C}$. January-September in 2019 was $+1.23^{\circ}\text{C}$ relative to 1880-1920, second to 2016 ($+1.33^{\circ}\text{C}$) for those nine months. 2016 was affected by a super El Nino and 2019 by a weak El Nino and being near the solar cycle minimum. Although 2019 may be warmer than 2016 over the next three months, it seems unlikely that the 2019 annual mean will exceed that of 2016.

Now let's see where this very warm temperature took place. For the temperature anomaly maps we use 1951-1980 as base period because the spacial coverage is not as good in earlier years. In September it was very warm near the North Pole, in the U.S. Southcentral to Southeast, and in the Gobi Desert and surrounding areas. Anomalies (relative to 1951-1980 mean) in some places exceeded 4°C . For example, monthly mean daily mean temperatures were Colorado Springs 20.4°C ($+4.3^{\circ}\text{C}$), Dallas, Texas 29.7°C ($+4.2^{\circ}\text{C}$), and Lexington, Kentucky 25.3°C ($+4.9^{\circ}\text{C}$). According to The Weather Channel "More than 50 cities across the country experienced their hottest September in more than a century of recordkeeping."

