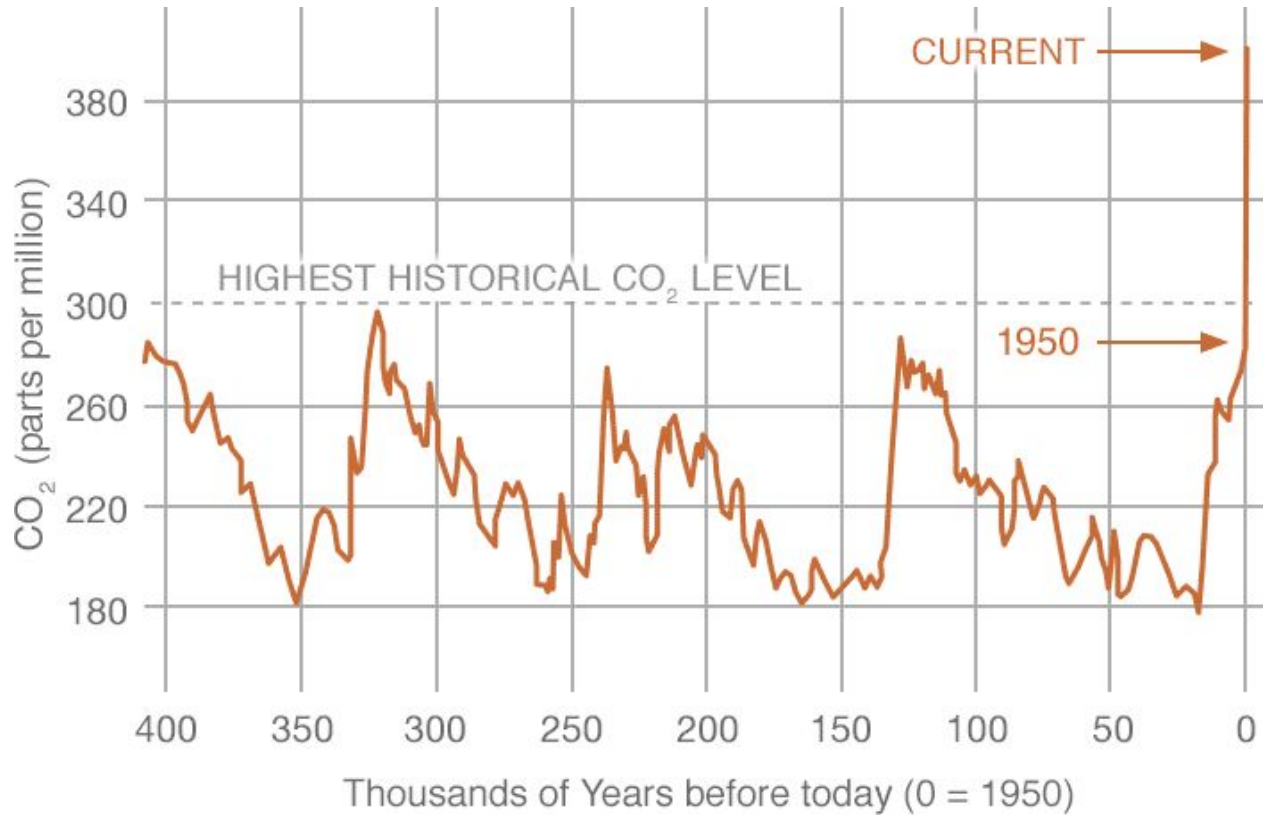


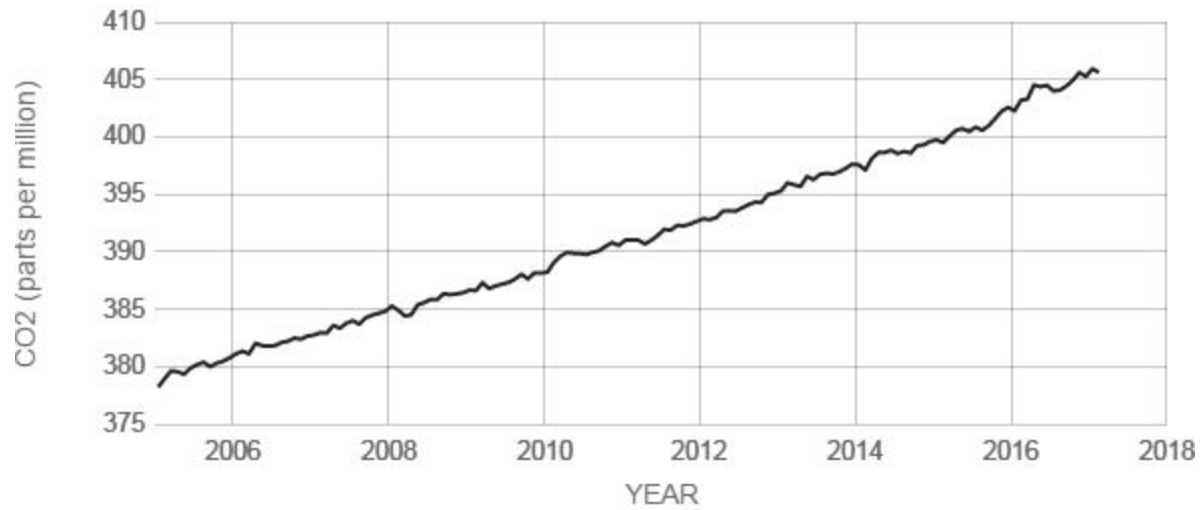
PROXY (INDIRECT) MEASUREMENTS

Data source: Reconstruction from ice cores. Credit: NOAA



DIRECT MEASUREMENTS: 2005-PRESENT

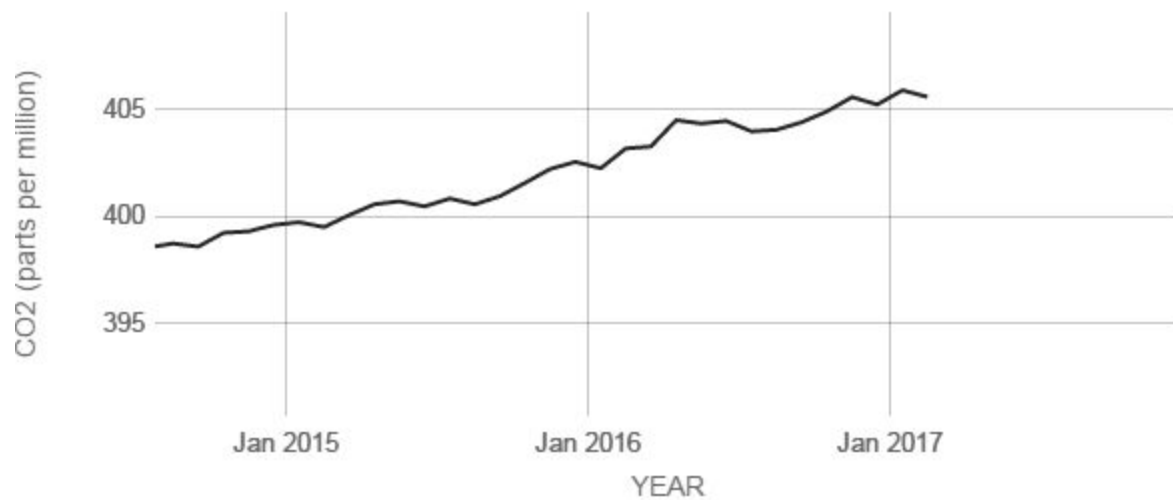
Data source: Monthly measurements (average seasonal cycle removed). Credit: [NOAA](#)



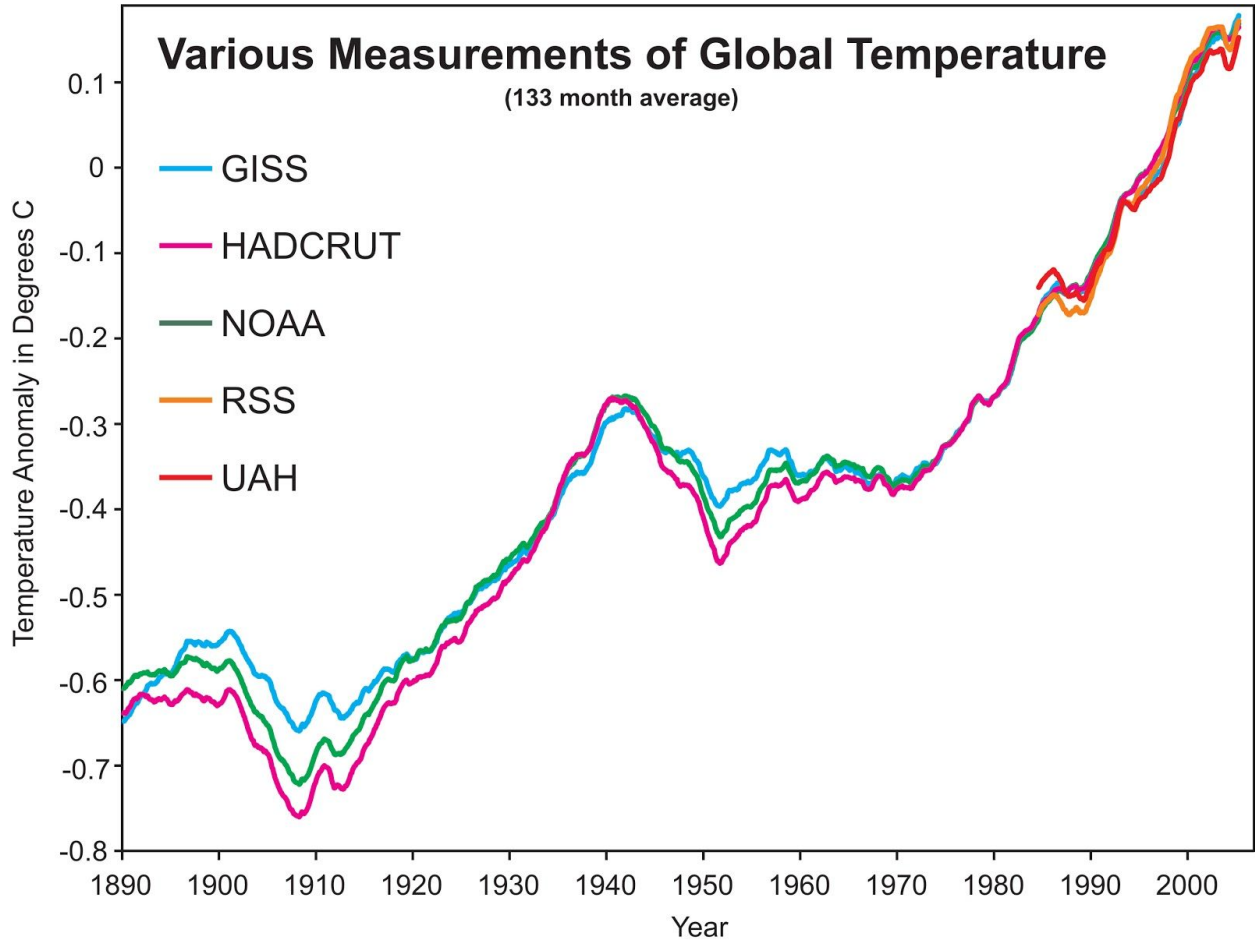
Source: [climate.nasa.gov](#)

DIRECT MEASUREMENTS: 2005-PRESENT

Data source: Monthly measurements (average seasonal cycle removed). Credit: [NOAA](#)

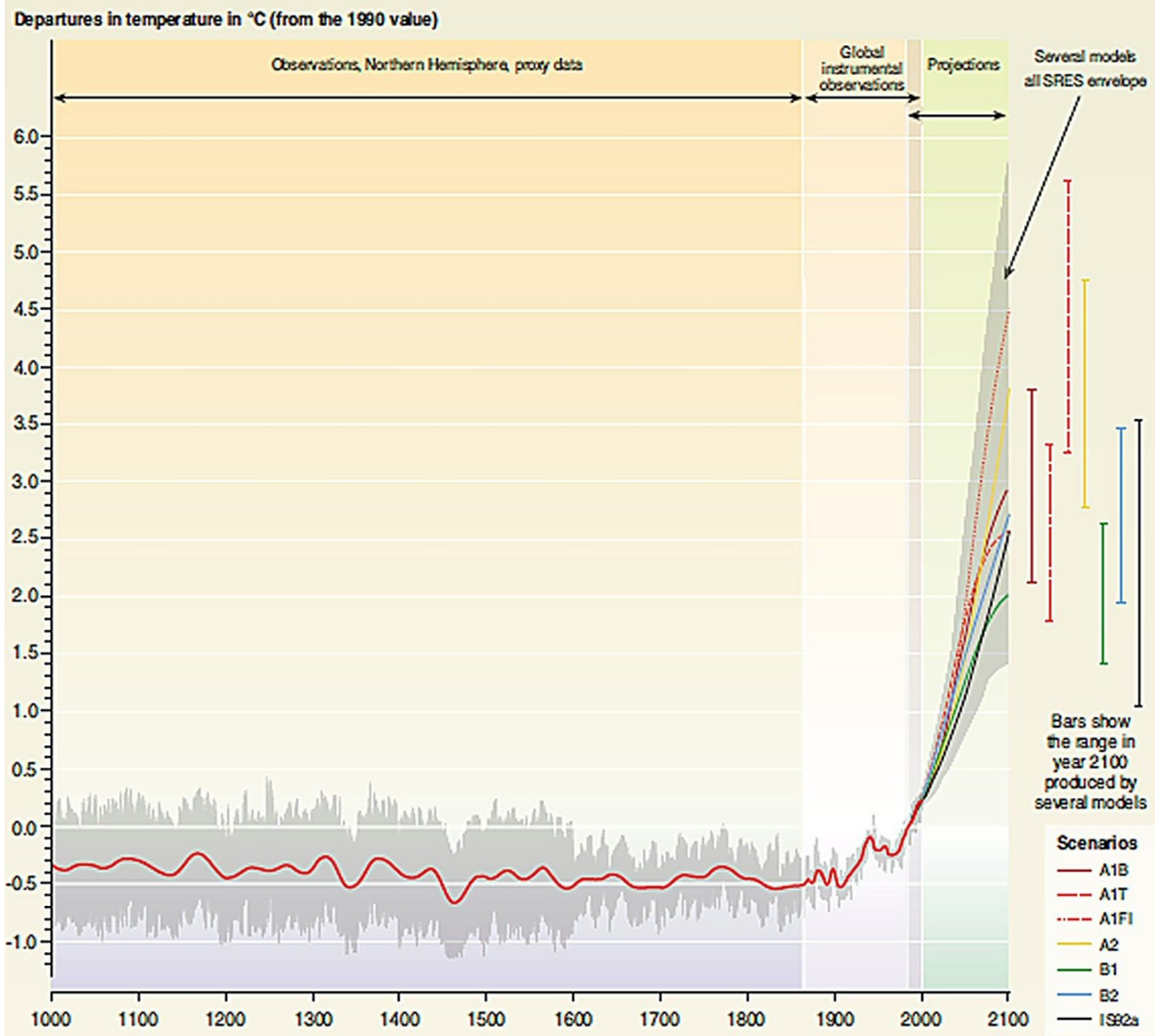


Source: [climate.nasa.gov](#)



Source: skepticalscience.com

Variations of the Earth's surface temperature: years 1000 to 2100



Source: IPCC - 2001

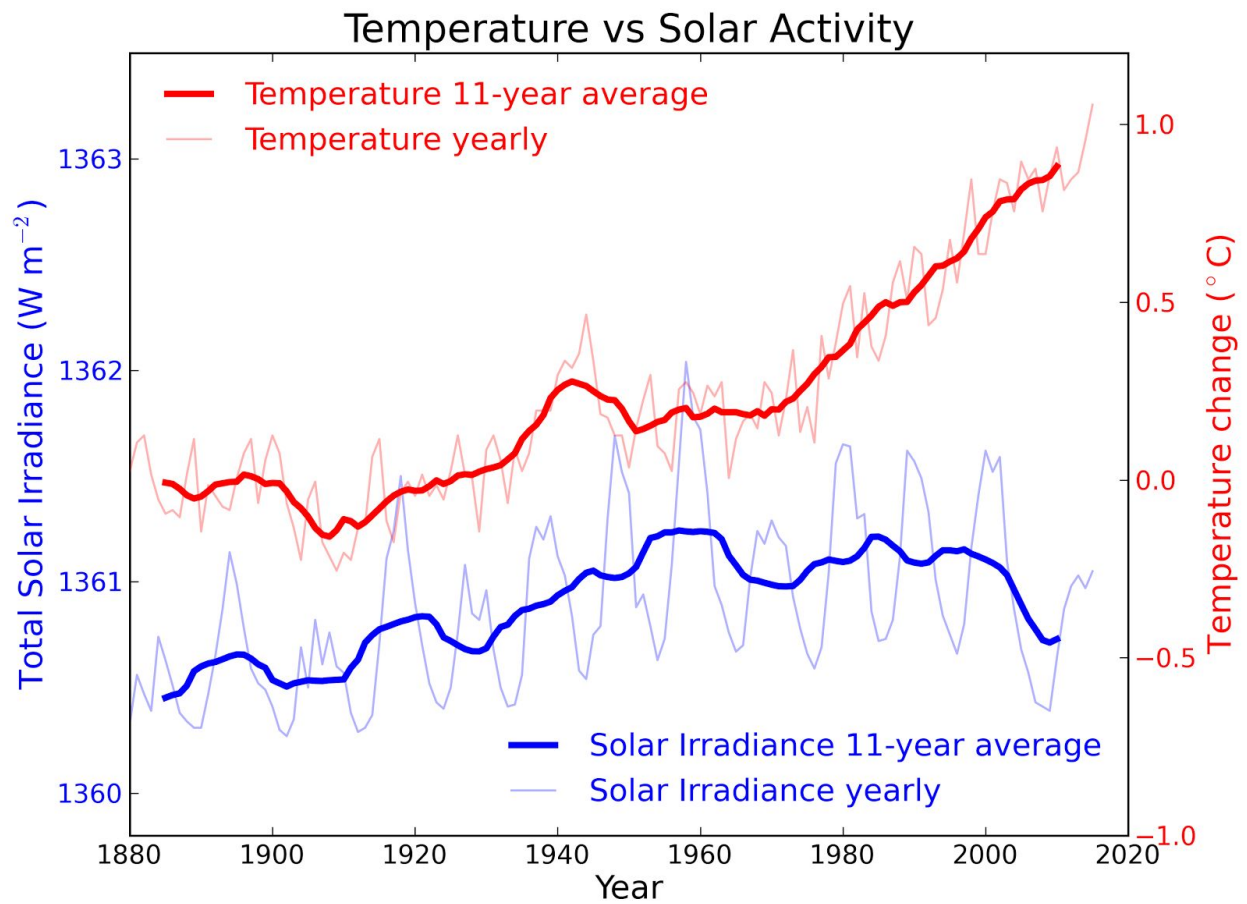


Figure 1: Annual global temperature change (thin light red) with 11 year moving average of temperature (thick dark red). Temperature from [NASA GISS](#). Annual Total Solar Irradiance (thin light blue) with 11 year moving average of TSI (thick dark blue). TSI from 1880 to 1978 from [Krivova et al 2007](#). TSI from 1979 to 2015 from [the World Radiation Center](#) (see their [PMOD index page](#) for data updates). Plots of the most recent solar irradiance can be found at the [Laboratory for Atmospheric and Space Physics LISIRD site](#).

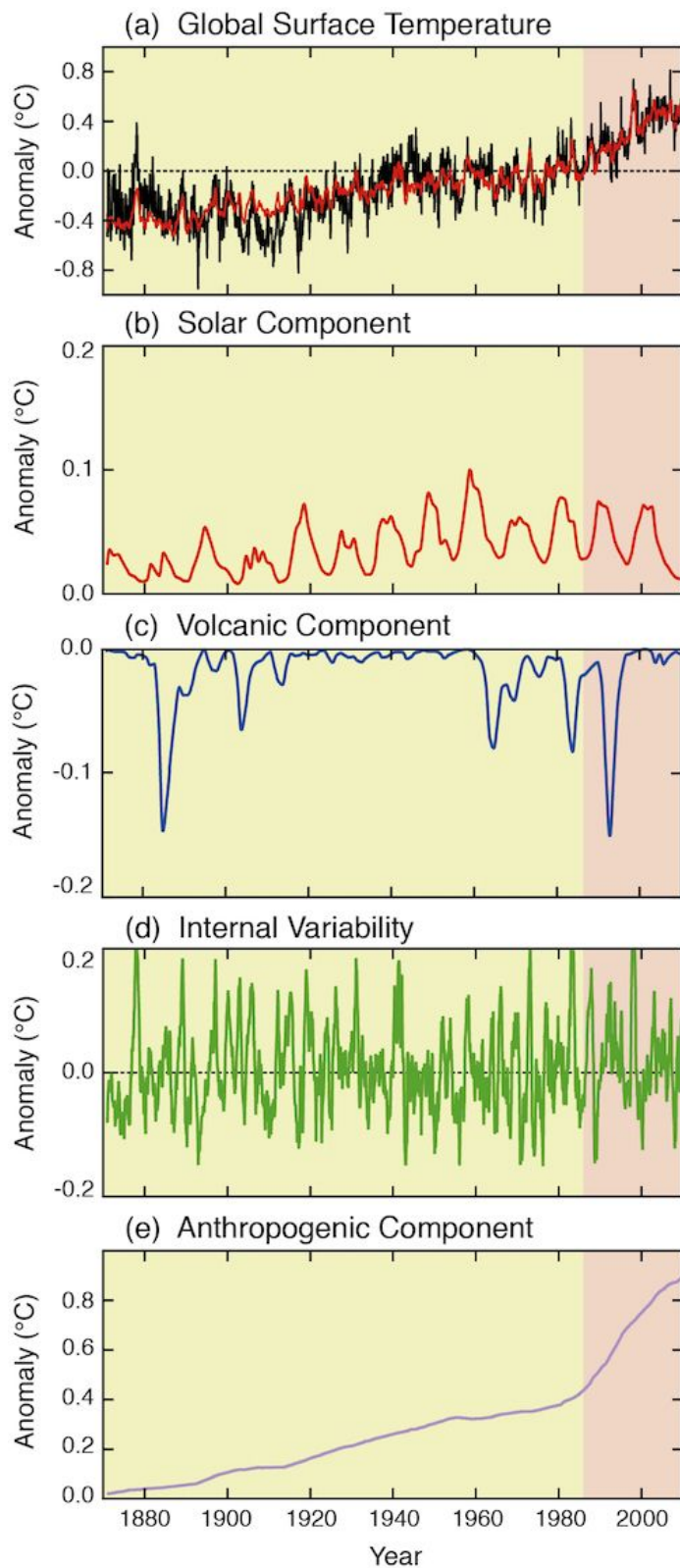
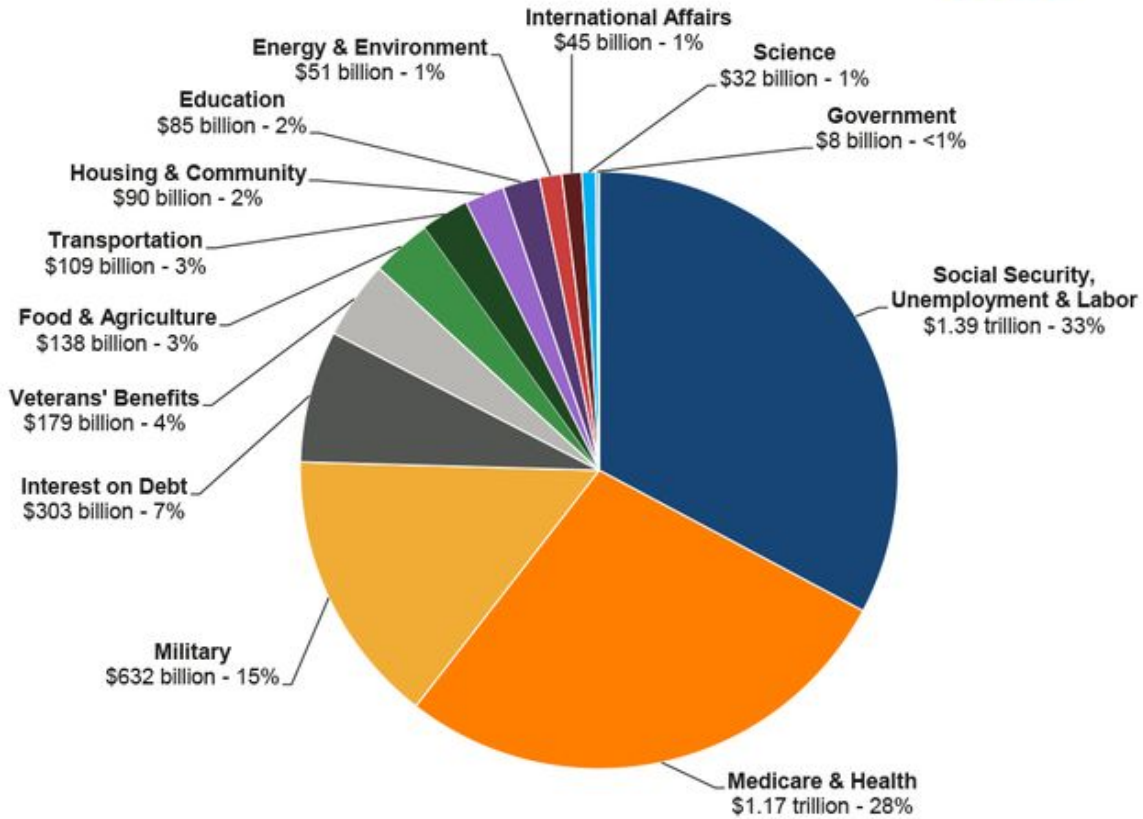


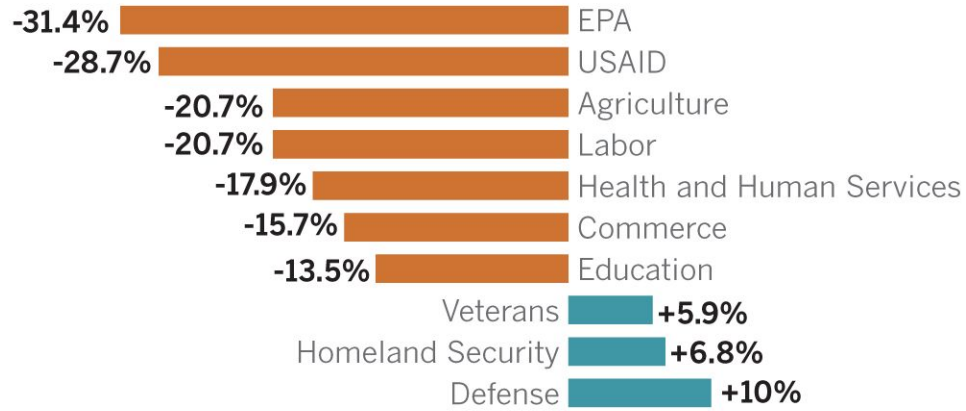
Figure 2 Global surface temperature anomalies from 1870 to 2010, and the natural (solar, volcanic, and internal) and anthropogenic factors that influence them. (a) Global surface temperature record (1870–2010) relative to the average global surface temperature for 1961–1990 (black line). A model of global surface temperature change (a: red line) produced using the sum of the impacts on temperature of natural (b, c, d) and anthropogenic factors (e). (b) Estimated temperature response to solar forcing. (c) Estimated temperature response to volcanic eruptions. (d) Estimated temperature variability due to internal variability, here related to the El Niño-Southern Oscillation. (e) Estimated temperature response to anthropogenic forcing, consisting of a warming component from greenhouse gases, and a cooling component from most aerosols. (IPCC AR5, [Chap 5](#))

President's Proposed \$4.2 Trillion Total Spending (FY 2017)



Trump budget

Losers and Winners



Source: Los Angeles Times