

Exiting Paris agreement won't affect our climate

Facts Based on Peer Reviewed Scientists' Data

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With the United States exiting the Paris agreement, there is much political discussion on global climate. Because scientific information is complex politicians and reporters seldom dig deeply. I will attempt here to explain the complex facts in a way to be understood by nearly all readers.

Past ocean temperatures can be scientifically determined from water (old ice). Deuterium atoms, heavy hydrogen (D), are constant in the ocean waters. Warmer oceans produce a higher ratio of deuterium in water vapor. Therefore, deuterium in ancient snow and ice sheets indicates the past ocean temperatures (climate history) where regular light water is H₂O, semi-heavy water is HDO, and heavy water is D₂O.

Thirteen French, three American, and three Russian scientists (J.R. Petit, et.al.) drilled the 2-mile deep Vostok borehole in Antarctica and published their findings in the peer reviewed journal, *Nature*, Vol. 399, p. 429 (1999). More than 3,000 pieces of ancient ice were analyzed to determine past average ocean temperatures and also carbon dioxide in the ancient atmosphere. This climate history extends back 420,000 years and shows that *Mother Nature* gave us four ice ages during this period, each followed by major global warming. Global temperatures ranged from 17°F lower than today to 6°F higher than today.

Thermometer measurements for the last 100 years (J.R. Christy, et.al., *Journal of Climate*, Vol. 19, p. 548 (2005).) have shown 1.9°F warming in urban areas of the California's Central Valley where black roofs, black parking lots, black roads, and agriculture have influenced the temperature. The nearby Sierra Mountains, where carbon dioxide and the sun exert the main influences, showed 0.5 °F cooling in the last 100 years. Important points here are that *Mother Nature's* influence on temperature is much greater than that of man and carbon dioxide's measured influence is very small and insignificant.

The Vostok borehole measured an historical range for carbon dioxide, as provided by *Mother Nature*, from 0.018% during ice ages to 0.030% after global warming. During the last 100 years carbon dioxide has increased in our atmosphere from 0.030% to 0.040% (National Oceanic & Atmospheric Administration, ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_mlo.txt) and (J.R. Petit, et.al., *Nature*, Vol. 399, p. 429 (1999).) that can be attributed to burning fossil fuels. This increase in carbon dioxide to well beyond *Mother Nature's* range has alarmed many who have tried to blame carbon dioxide for global warming.

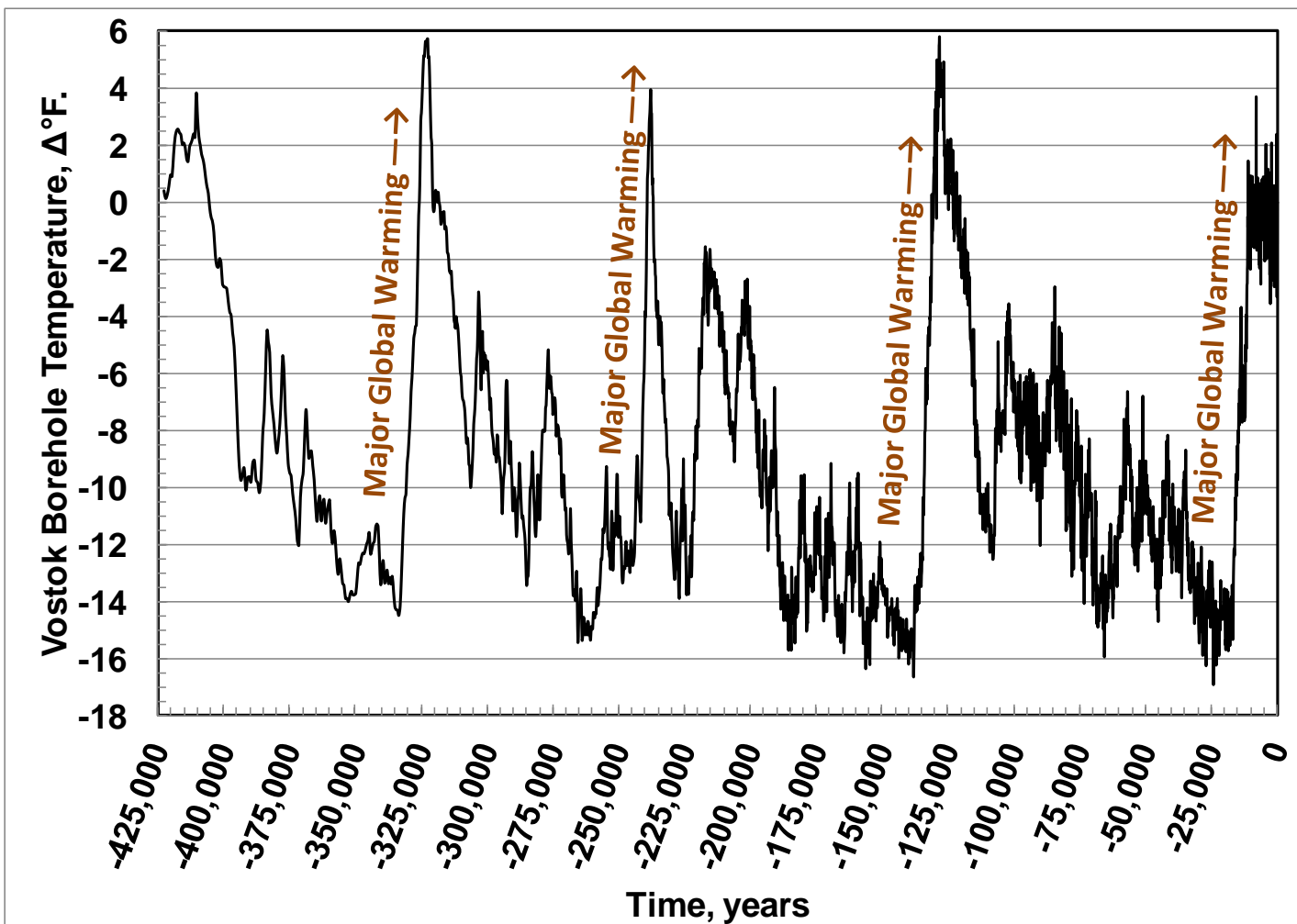
The Vostok data show a correlation between global temperatures and carbon dioxide levels in the atmosphere and some declare this proof that carbon dioxide causes global warming. Really? Does a correlation between a fire truck in the street and a house fire prove fire trucks cause house fires? A closer look at timing shows that Vostok global temperatures change first followed by a change of carbon dioxide in the atmosphere (J.-M. Barnola, et.al. *Tellus* Vol.43(B), p. 83 (1991).). How? A cold soda drink retains its carbon dioxide while a warm soda drink quickly releases its carbon dioxide to the atmosphere, just as would the ocean.

Thousands of plant growth experiments with enhanced carbon dioxide show that plants grow faster and larger. This, known as aerial fertilization, has given plant growth enhancement of 16 to 27% due to the increased carbon dioxide in our atmosphere during the past 100 years. A review of plant growth and our increased food supply is published (K.E. Idso, et.al. *Agricultural and Forest Meteorology*. Vol. 69, p. 153 (1994)).

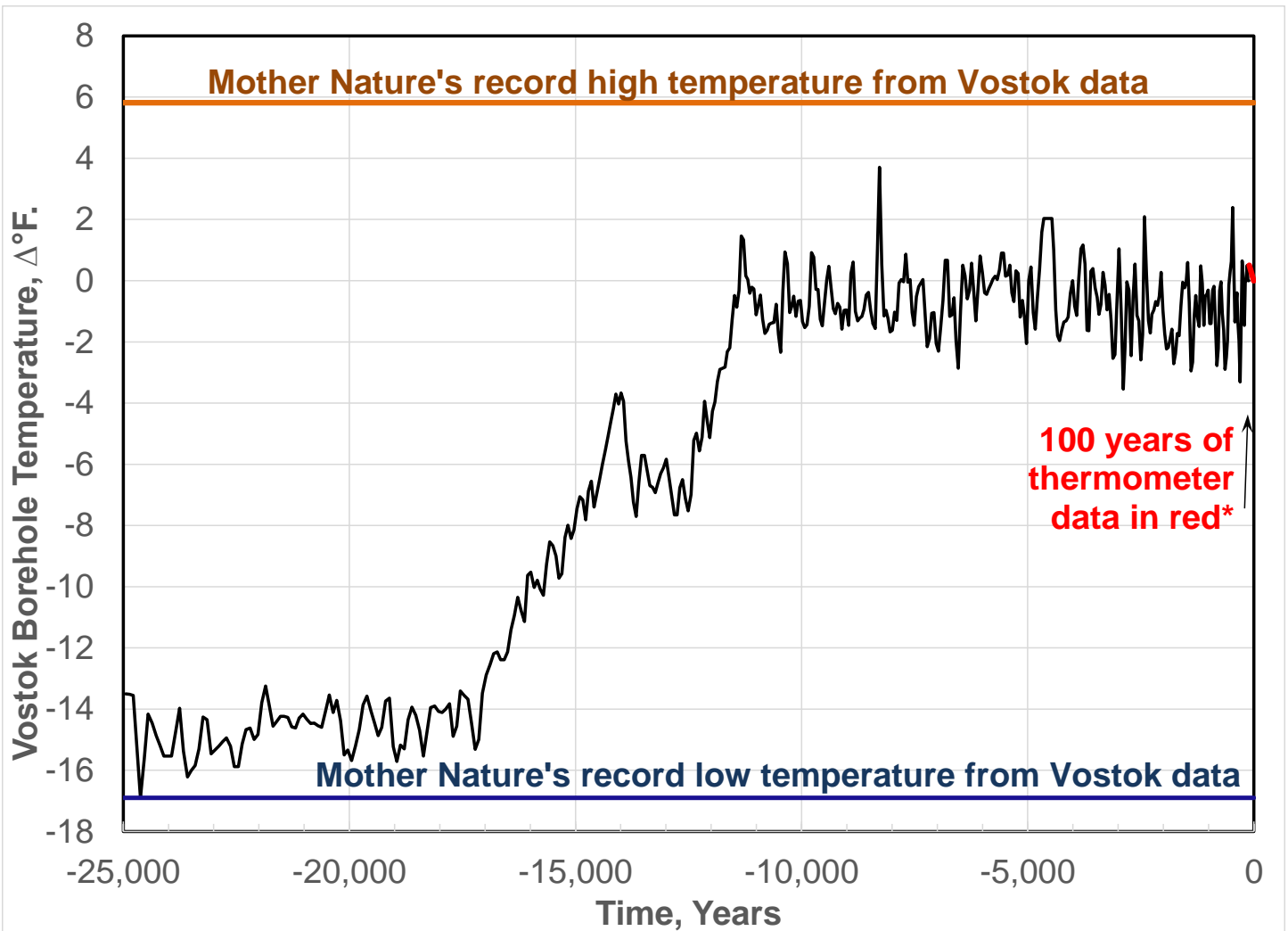
The peer reviewed scientific data on climate change in the last 100 years, when man's burning of fossil fuels increased carbon dioxide in the atmosphere, is compared to what *Mother Nature* had previously provided. *Mother Nature* wins convincingly and easily as the real influence. Increased carbon dioxide has provided increased food and an insignificant temperature change. My goal is to not harm the climate. The peer reviewed scientific data show that withdrawing from the Paris agreement will insignificantly affect climate.

* Dr. Summers is a scientist and engineer with 55 years experience in the generation and analysis of data in the plastics industry. He used the same scientific techniques to analyze environmental data provided by others.

These two graphs are added to the Morning Journal article.



Average ocean temperatures as the difference from current ocean temperatures. Data are from the two-mile deep Vostok, Antarctica borehole.



Average ocean temperatures as the difference from current ocean temperatures from the Vostok, Antarctica borehole. One hundred years of thermometer data from the California Sierra Mountains are included for comparison (J.R. Christy, et.al., *Journal of Climate*, Vol. 19. p. 548 (2005).) * The Sierra Mountain data avoids urban development influences but includes carbon dioxide effects because the winds distribute increased carbon dioxide to all locations including the mountains. The amount of temperature change comes from analysis of Christy's published data.