CLIMATE CHANGE STATISTICAL ANALYSIS 21 November 2024

This paper is a statistical analysis of the assertion that the world is warming at an accelerated rate due to human activity (anthropomorphic forcing), caused mainly by carbon dioxide (CO_2) emissions.

The data analyzed is from the United States (US) National Oceanic and Atmospheric Administration's (NOAA) public released of three charts:

1. Global Air Temperature Chart - inclusive years 1850 to 2009
2. UAHv6 Chart - inclusive years 1978 to 2023
3. UAHv6 Chart – inclusive years 2014 to 2023

1. Global Air Temperature Chart - inclusive years 1850 to 2009

i. Executive summary

Over 14,000 PhDs worldwide have done independent statistical reviews of the National Oceanic and Atmospheric Administration's (NOAA) published climate data (and other independent temperature data resources) and have confirmed these findings:

Source: NOAA published 2010 climate data (see Chart 1 and Table 1, Column 2)

a. Using the pre-industrial (1850 to 1880) recorded temperatures, researchers were able with 99% confidence to establish that prior to 1880 the world was warming in a linear manner. Specifically, world average temperatures were warming at 0.004 °C per year ($p = .01$, $n = 30$, y intercept = 14.58 °C @ year 1850, $\sigma = 0.24$ °C; see SPSS Output 3).

b. Using the pre-industrial (1850 to 1880) model of nominal warming, the predicted normal temperatures (no anthropomorphic forcing) for 2009 is 15.22 °C ($p = .05$, $n=159$; see SPSS Output 3).

c. The NOAA reported worldwide average temperature for 2009 is 15.30 °C (a difference of +0.08 °C) (see Chart 1 and Table 1, Column 2, 2009 reported temperature).

d. Using International Business Machines (IBM) Statistical Package for Social Sciences (SPSS) researchers are 95% confident that the current world temperatures are within 1/4 of 1 °C of expected normal temperatures ($p=.05$, $n =159$).

e. Using International Business Machines (IBM) Statistical Package for Social Sciences (SPSS) researchers are 99% confident that the current world average temperatures are within 1/3 of 1 °C of expected normal temperatures ($P=.01$, $n =159$).

ii. Methods and calculations

a. In reviewing the published NOAA chart (Chart 1), the first indicator needing further inquiry is the scale of the temperatures reported. Chart 1 temperature scale is reported at 0.20 °C, not 2.00 °C.

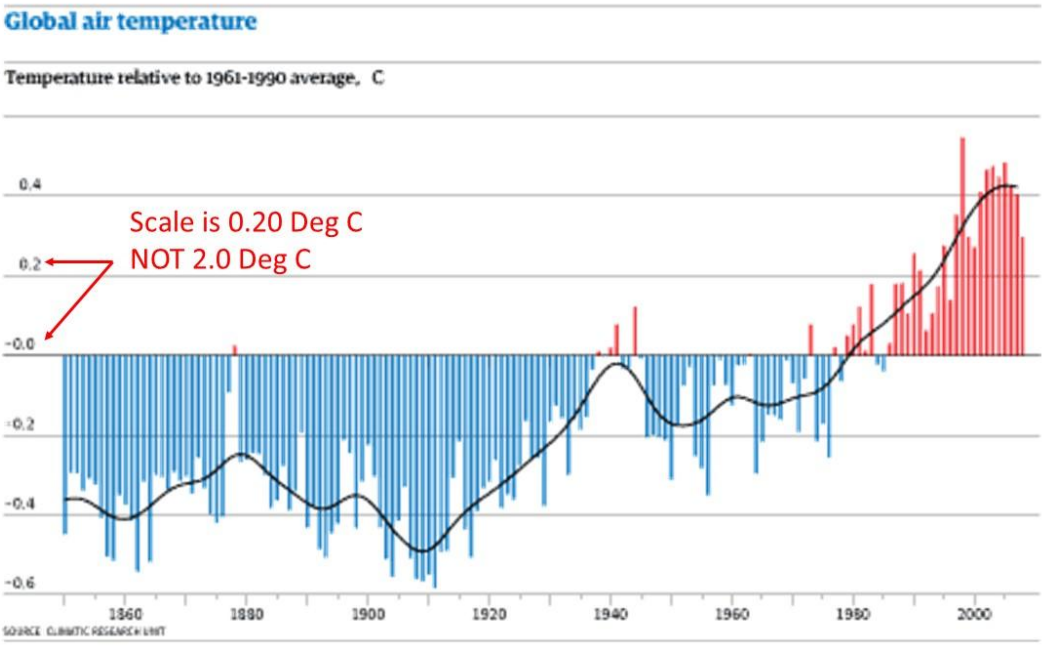

Chart 1: NOAA 2010 Climate Data and Scale Observation

b. From Chart 1, researchers can extract worldwide average temperatures to two significant digits and create a table of the data for further investigation (-0.00 is 15.00 °C, NOAA 2010) (see Table 1, n =159).

The data from Chart 1, plotted on Table 1, then is recharted against a 2.00 °C scale, and is graphed in Chart 2 (n = 159).

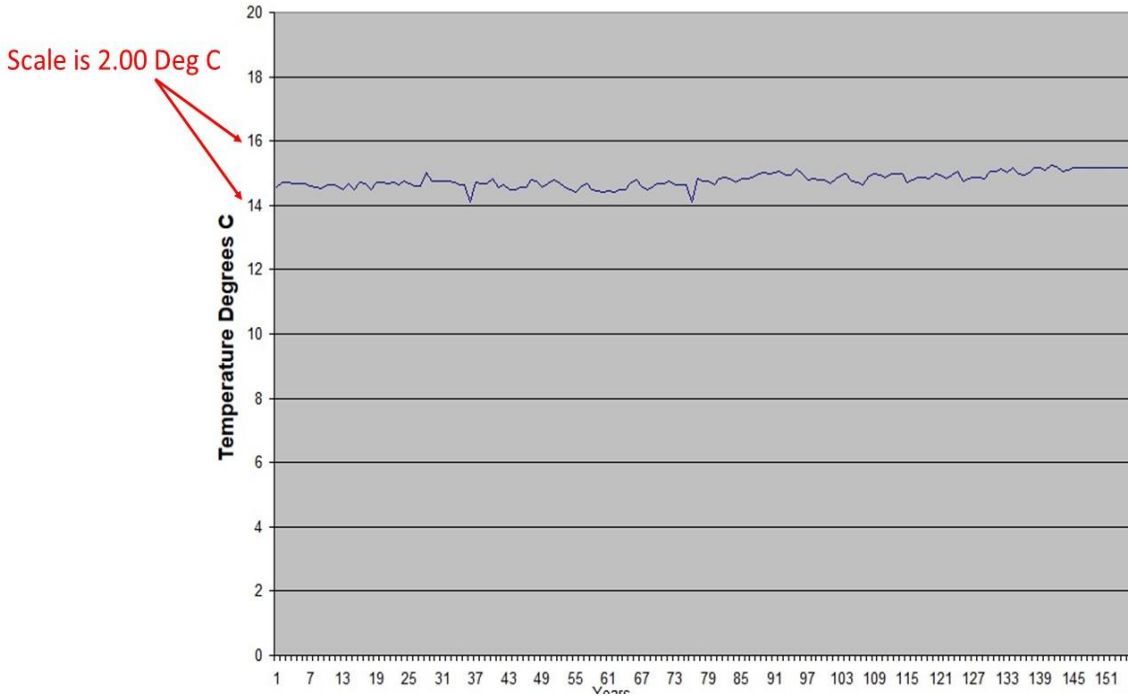

Chart 2: NOAA 2010 Climate Data Replotted on 2.00 °C Scale

c. Further statistical investigation of world-reported NOAA data reveals an interesting world temperature summary. Noteworthy is the average world temperature of 14.82 °C, with a Standard Deviation (σ) of 1/4 of 1 °C (0.25 °C, n = 159) (see SPSS Output 1: Statistical Investigation NOAA Climate Data, n = 159).

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
V2	159	100.0%	0	0.0%	159	100.0%

Descriptives

			Statistic	Std. Error
V2	Mean		14.8196	.02016
	95% Confidence Interval for Mean	Lower Bound	14.7798	
		Upper Bound	14.8594	
	5% Trimmed Mean		14.8058	
	Median		14.7600	
	Variance		.065	
	Std. Deviation		.25420	
	Minimum		14.41	
	Maximum		15.53	
	Range		1.12	
	Interquartile Range		.32	
	Skewness		.791	.192
	Kurtosis		.223	.383

SPSS Output 1: Statistical Investigation NOAA Climate Data (n = 159)

d. To establish nominal expected temperatures without anthropomorphic forcing, we took the thirty years prior to 1880 (1850 to 1880; see Table 1, Column 3) and ran a statistical analysis of these years. Climate investigation of these thirty years of world average temperatures reports the average world temperature prior to 1880 was 14.66 °C with a standard deviation (σ) of .11 of 1 °C (n = 30) (see SPSS Output 2: Statistical Investigation Pre-Industrial (1850 to 1880)).

			Statistic	Std. Error
NOAA1880	Mean		14.6595	.01712
	95% Confidence Interval for Mean	Lower Bound	14.6249	
		Upper Bound	14.6941	
	5% Trimmed Mean		14.6544	
	Median		14.6700	
	Variance		.012	
	Std. Deviation		.10825	
	Minimum		14.42	
	Maximum		15.02	
	Range		.60	
	Interquartile Range		.10	
	Skewness		.635	.374
	Kurtosis		2.874	.733

SPSS Output 2: Statistical Investigation Pre-Industrial (1850 to 1880) Climate Data (n = 30)

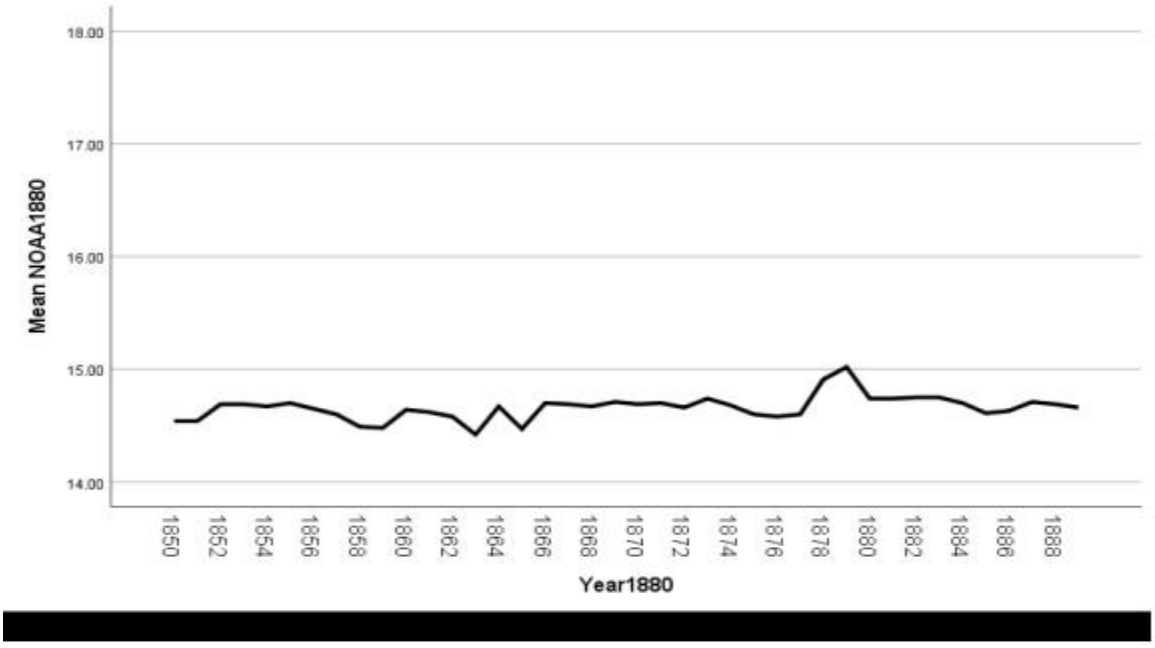

Chart 3: Pre-Industrial (1850 to 1880) Climate Data (n = 30)

e. Further investigation of the potential for rapid warming was needed. To establish a divergence from the expected normal, we used the preindustrial temperature reports (prior to 1880) to establish a baseline for normal world warming without CO_2 influence (see Table 1, Column 2; n = 30).

f. Using SPSS, we looked at form and fit of the recorded climate data against mathematical trends (Is it a sine wave/cosine/exponential/linear function?) for the warming trends pre-1880. With 99% confidence, SPSS was able to determine that the warming prior to 1880 fit a linear model (P =.01, n = 30, y intercept = 14.58 °C @ year 1850, σ = 0.24 °C; see SPSS Output 3).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.411[a]	.169	.147	.09996

a. Predictors: (Constant), Year40

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.077	1	.077	7.738	.008[b]
	Residual	.380	38	.010		
	Total	.457	39			

a. Dependent Variable: NOAA1880

b. Predictors: (Constant), Year40

Y= MX + B
Y = temps at the year past 1850
X = years past 1850
B = start value
M = Slope

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.581	.032		452.679	.000
	Year40	.004	.001	.411	2.782	.008

a. Dependent Variable: NOAA1880

SPSS Output 3: Analysis of Variance Pre-Industrial (1850 to 1880) Climate Data (P=.01, N = 30)

g. Using the reported linear summary, we matched Y = MX + B to calculate the normal expected warming, using the pre-1880 temperatures to determine the expected temperatures for years 2009 and 2022.

Y (2009) = .004(2009 - 1850) + 14.58 °C
Y (2009) = 15.22 °C (non-industrial era prediction of normal expected temperatures)

Y (2020) = .004(2020 - 1850) + 14.58 °C
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The recorded world temperature for 2009 is 15.30 °C and is only 0.08 °C above expected and predicted value of 15.22 °C.

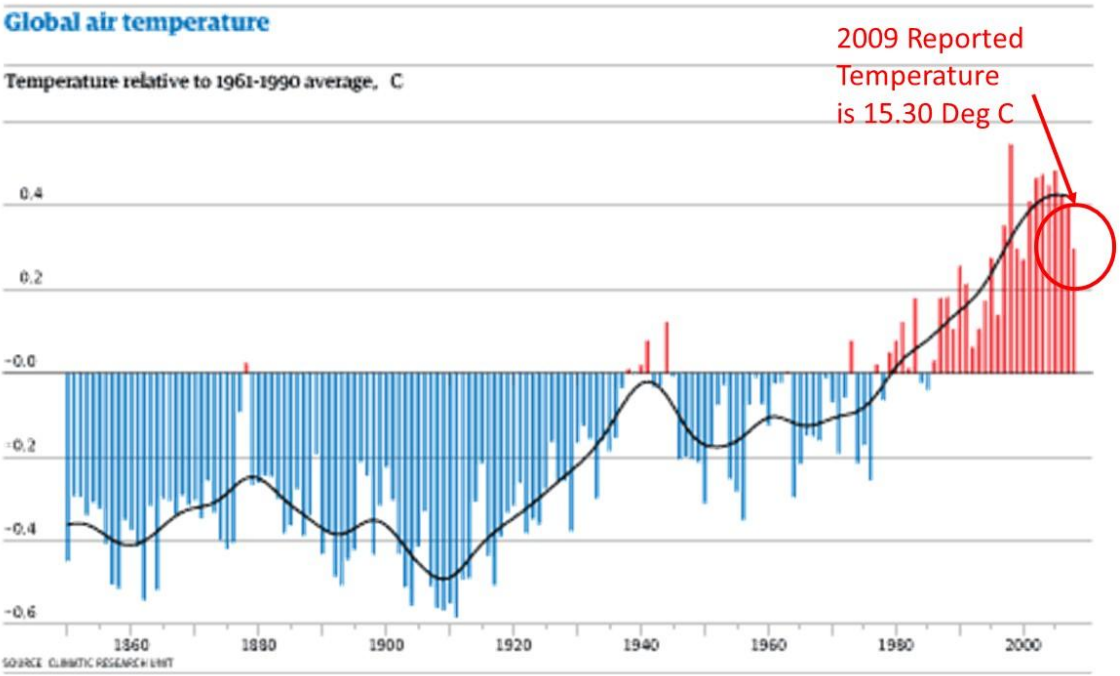

Chart 1: NOAA 2010 Climate Data and 2009 Temperature
(Expected normal temperature is 15.22 °C; actual temperature is 15.30 °C.)

iii. Conclusions: Global Air Temperature Chart - inclusive years 1850 to 2009

The statistical analysis above does not support the claim that we have diverged with any statistical significance away from the predicted normal, post ice age warming.

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Over 14,000 PhDs worldwide have done independent statistical reviews of the National Oceanic and Atmospheric Administration's (NOAA) published climate data (and other independent temperature data resources) and have confirmed these findings:

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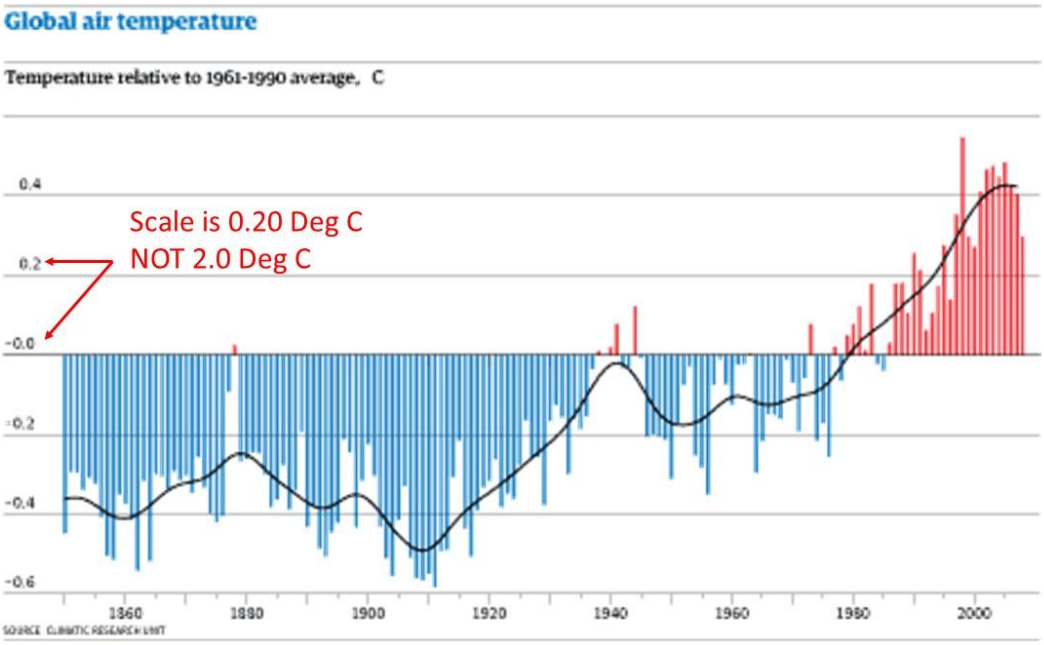

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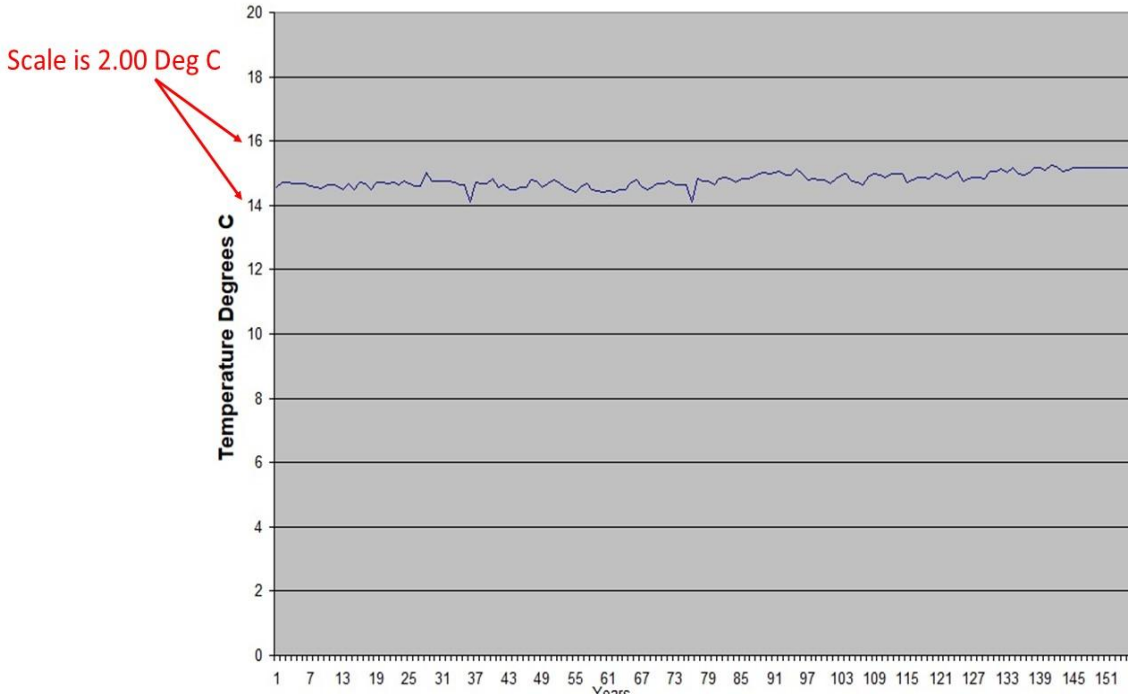

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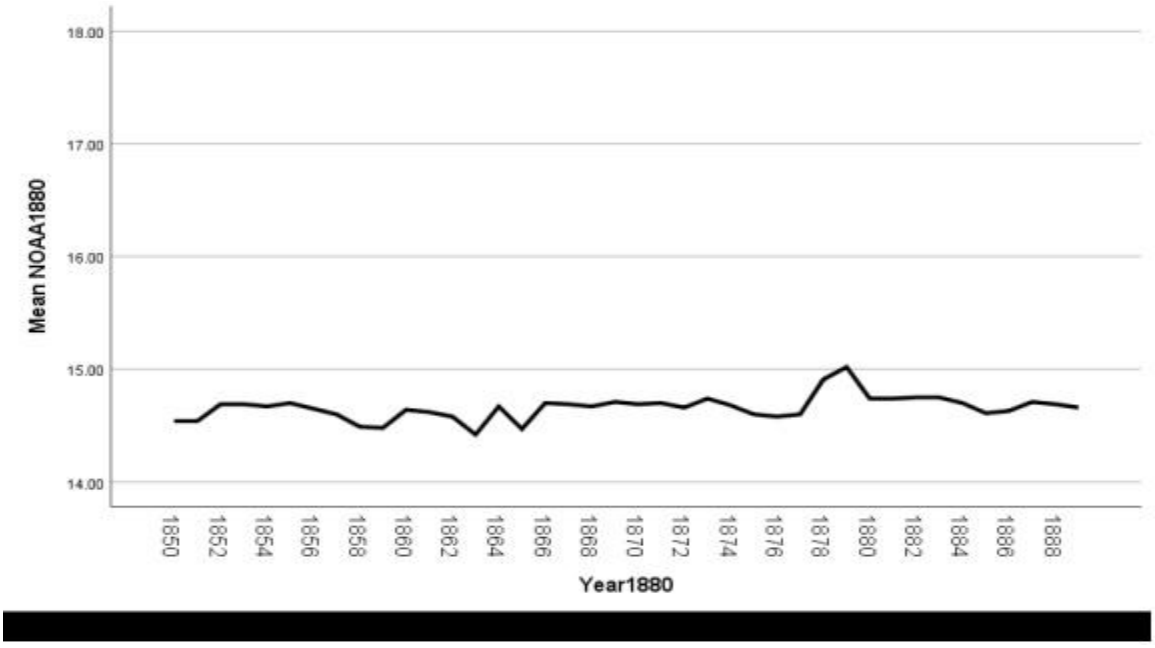

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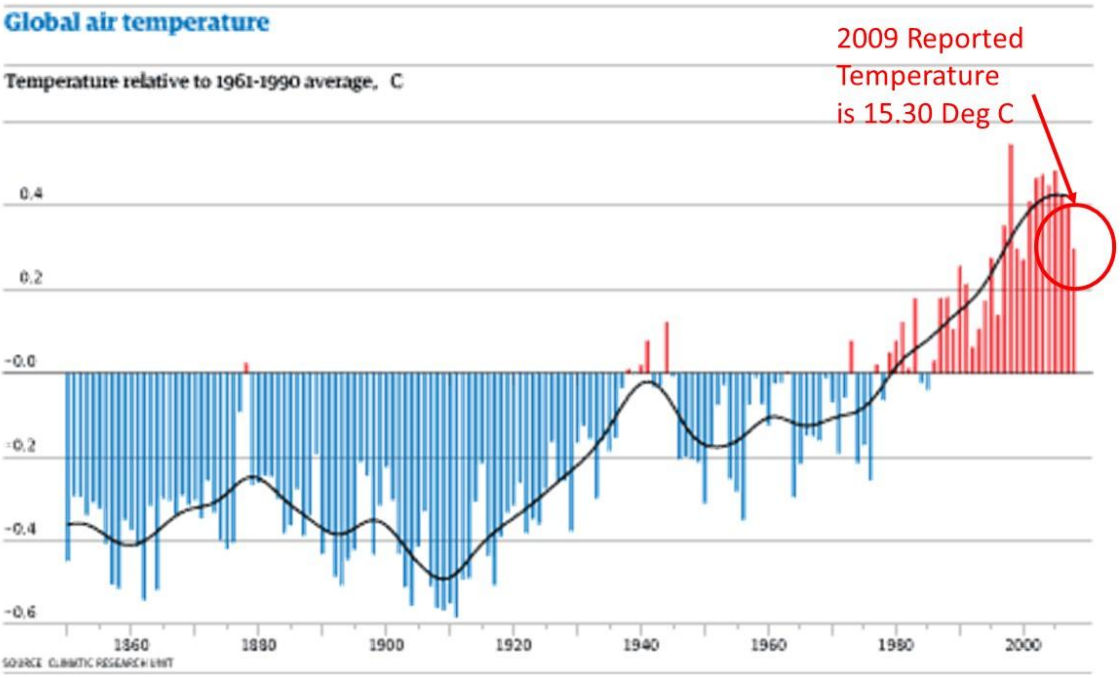

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vi. Conclusions: Global Air Temperature Chart - inclusive years 1850 to 2009

The statistical analysis above does not support the claim that we have diverged with any statistical significance away from the predicted normal, post ice age warming.

vii. Arguments against this paper

a. Argument: “There are record temperatures in my city every year, which proves CO_2 emissions are warming the planet.”

Response: Your city should have record temperatures every year, because normal warming is .004 °C per year. In 2009, every city should be close to the predicted temperature of 15.22 °C and, in 2020, at 15.26 °C. In 2022, normal expected temperature is 15.27 °C ($p = .05$, $n=159$).

The assertion that a single observation of record high temperatures is proof of climate change and global anthropomorphic climate change is a DATA misinformation. See “How to Detect Scientific Lies,” Slides 1922, at https://headexplosionfx.com/How%20to%20detect%20scientific%20lies.pdf.

b. Argument: “Every year, cities around the world are recording record temperatures.”

Response: Every city should have record temperatures every year, as normal warming is .004 °C per year. In 2009, every city should be close to the predicted temperatures of 15.22 °C and in 2020, at 15.26 °C. In 2022, normal expected temperature is 15.27 °C ($p = .05$, $n=159$).

The assertion that every city is experiencing a record high temperature is proof of climate change and global anthropomorphic climate change is an INFORMATION misinformation. See “How to Detect Scientific Lies,” Slides 2628, at https://headexplosionfx.com/How%20to%20detect%20scientific%20lies.pdf.

c. Argument: “Record climate ‘disasters’ prove global warming.”

Response: There are no studies comparing the rate and severity of current climate “disasters” to years previous to 1880 and the industrial revolution.

The assertion that the world is experiencing unprecedented climate activity has not been studied or reported to any statistical significance. Asserting that observations around the world are extreme is a KNOWLEDGE misinformation. See “How to Detect Scientific Lies,” Slides 4647, at https://headexplosionfx.com/How%20to%20detect%20scientific%20lies.pdf.

d. Why are the years past 2010 not included in your work?

   Response: The data that has been repeatedly released from NOAA by climate charts have also been reviewed, and the linear trajectory of the global warming is also confirmed out to 2023 with no deviations from this papers statistical analysis.

viii. Summary

a. Over 14,000 PhDs assert, with 95% confidence, that current global temperatures are within 1/4 of 1 °C from expected normal temperatures.

b. We are 99% confident that current global temperatures are within 1/3 of 1 °C from expected normal temperatures (i.e., no acceleration in warming).

c. So far, in no paper, report, or book have the climate alarmists displayed the results of their scientific proofs. There are no reports of normal expected temperature, only reports that we are already divergent above the normal from 1.3 °C to over 2.1 °C.

d. What we see from climate alarmists is statistical analysis of their own computer models, not the actual data. Al Gore used these computer models to predict that New York and Miami would be underwater over 15 years ago. His predictions did not come true.

e. We demand that the global climate alarmists show us what the normal predicted temperature should be and how they calculated that value, then compare it to the current temperature and show the statistical measure of that divergence. They should either confirm this paper or refute it.

Data From NOAA 2010 Climate Chart

YEAR	Temp	Temp
1850	14.56	14.56
1851	14.72	14.72
1852	14.71	14.71
1853	14.66	14.66
1854	14.7	14.7
1855	14.68	14.68
1856	14.59	14.59
1857	14.5	14.5

1858	14.49	14.49
1859	14.6	14.6
1860	14.57	14.57
1861	14.59	14.59
1862	14.46	14.46
1863	14.68	14.68
1864	14.48	14.48
1865	14.7	14.7
1866	14.7	14.7
1867	14.66	14.66
1868	14.72	14.72
1869	14.69	14.69
1870	14.7	14.7
1871	14.66	14.66
1872	14.75	14.75
1873	14.67	14.67
1874	14.6	14.6
1875	14.58	14.58
1876	14.6	14.6
1877	14.92	14.92
1878	15.02	15.02
1879	14.74	14.74
1880	14.74	
1881	14.76	
1882	14.76	
1883	14.7	
1884	14.63	
1885	14.64	
1886	14.73	
1887	14.62	
1888	14.67	
1889	14.82	
1890	14.57	
1891	14.63	
1892	14.52	
1893	14.5	
1894	14.56	
1895	14.58	
1896	14.78	
1897	14.76	
1898	14.57	
1899	14.68	
1900	14.78	
1901	14.69	
1902	14.57	
1903	14.49	

1904	14.44
1905	14.59
1906	14.67
1907	14.49
1908	14.44
1909	14.43
1910	14.55
1911	14.42
1912	14.52
1913	14.52
1914	14.61
1915	14.78
1916	14.57
1917	14.49
1918	14.62
1919	14.67
1920	14.68
1921	14.74
1922	14.62
1923	14.66
1924	14.64
1925	14.73
1926	14.84
1927	14.74
1928	14.75
1929	14.62
1930	14.84
1931	14.87
1932	14.85
1933	14.7
1934	14.86
1935	14.82
1936	14.85
1937	14.97
1938	15.02
1939	15
1940	15.02
1941	15.08
1942	14.97
1943	14.97
1944	15.12
1945	14.99
1946	14.8
1947	14.81
1948	14.8
1949	14.79

1950	14.69
1951	14.83
1952	14.93
1953	14.97
1954	14.75
1955	14.72
1956	14.65
1957	14.93
1958	14.99
1959	14.93
1960	14.87
1961	14.98
1962	14.98
1963	15
1964	14.7
1965	14.78
1966	14.85
1967	14.85
1968	14.84
1969	14.99
1970	14.94
1971	14.82
1972	14.95
1973	15.07
1974	14.79
1975	14.83
1976	14.85
1977	15.02
1978	14.94
1979	15.05
1980	15.07
1981	15.12
1982	15.01
1983	15.18
1984	14.98
1985	14.96
1986	15.03
1987	15.18
1988	15.18
1989	15.1
1990	15.26
1991	15.22
1992	15.06
1993	15.1
1994	15.17
1995	15.28

1996	15.14
1997	15.36
1998	15.54
1999	15.28
2000	15.27
2001	15.41
2002	15.46
2003	15.47
2004	15.45
2005	15.48
2006	15.42
2007	15.4
2009	15.3

Table 1: Temperatures Extracted from NOAA Chart 1 to two significant digits.