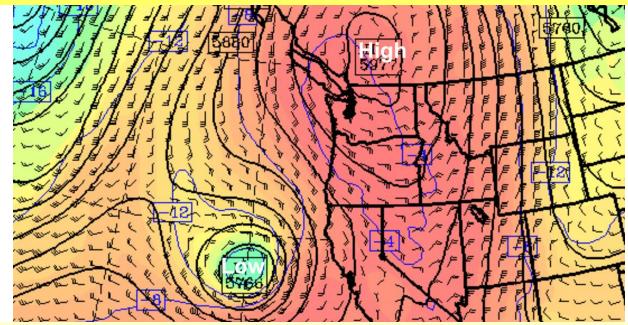
A Year Later: Alarmism, and Claims the Pacific Northwest's Heat Wave was Human-Caused



Bob Endlich

Cruces Atmospheric Sciences Forum

bendlich@msn.com

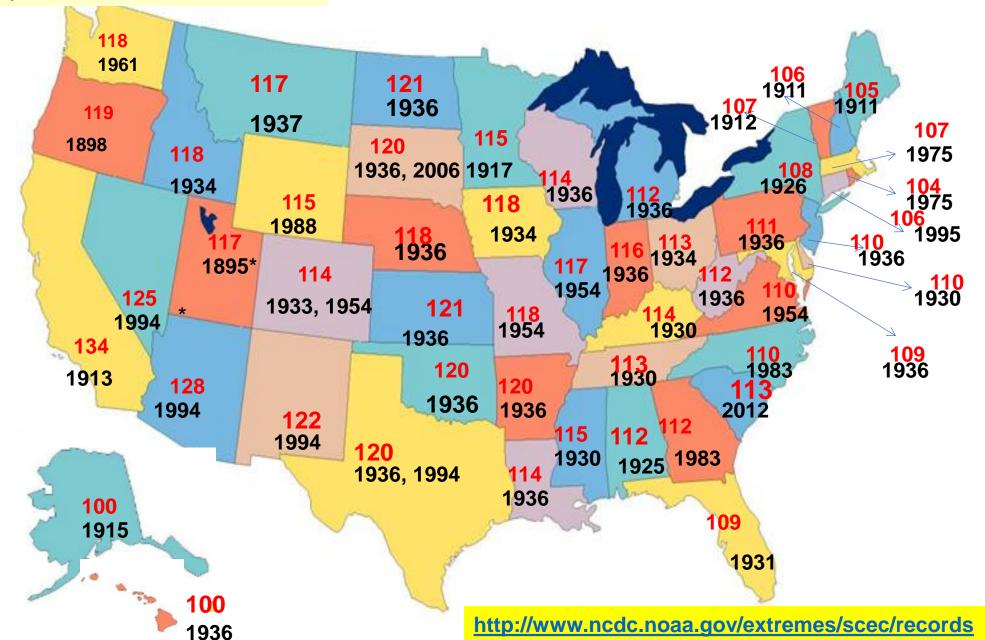
18 Jun 2022

Beginning Note

- A couple of graphics here came from materials I prepared for the Greenhouse Gas Hearing with "Citizen Input" in Santa Fe in 2011 and attended, identified with ***
- The Greenhouse Gas Hearing's "Citizen Input on Global Warming" was postponed
-because....wait for it....
- ...Heavy Snow (!) developed in Santa Fe during the morning of the hearing.
- I did not get to present my three minutes....

US. Record Maximum Temperature F by State and Year

* Chart from presentation I made in 2015



Outline:

NPR Charges that (Human-Caused, CO2 fueled) Climate Change is driving Weather Disasters

NPR doesn't account for characteristics of the climate we have – i.e., PDO Cold and La Nina

NPR doesn't account for the enhanced forest Fuel Loads from the Spotted Owl Decision

NPR shows stunning ignorance: lack of recent extreme rainfall records: NOAA, UK Met Office

The Pacific Northwest Heat Wave, one year on:

Weather Analysis and Forecast Maps

NOAA Extreme Maximum Temperature Page

CO2 Emissions and Temperatures Charts

It's the Sun, Stupid. End Note: (decreasing Global Cloud Cover increases Global Temps)

Climate Change Is Making Extreme Weather Events More Common : NPR

Climate Change Is Driving Deadly Weather Disasters From Arizona To Mumbai

What does this mean for wildfires?

Story is from 29 Jul 2021, almost a year ago.

About 95% of the West is in drought right now, and there's a clear cycle where heat dries out land and vegetation. So, when wildfires do happen, they burn hotter and even create their own weather systems in which huge pyrocumulus clouds can generate lightning strike — in turn causing even more fires.

Bob comment: not one word from NPR about important drivers of this situation: the PDO and ENSO cycles, and the Spotted Owl Decision

We've been in **PDO Cold** since 1999: brings more La Nina Droughts to western USA

Spotted Owl Decision ended logging in the Mountain West; trees grew, fuel increased.

Climate Change Is Making Extreme Weather Events More Common : NPR

Climate Change Is Driving Deadly Weather Disasters From Arizona To Mumbai

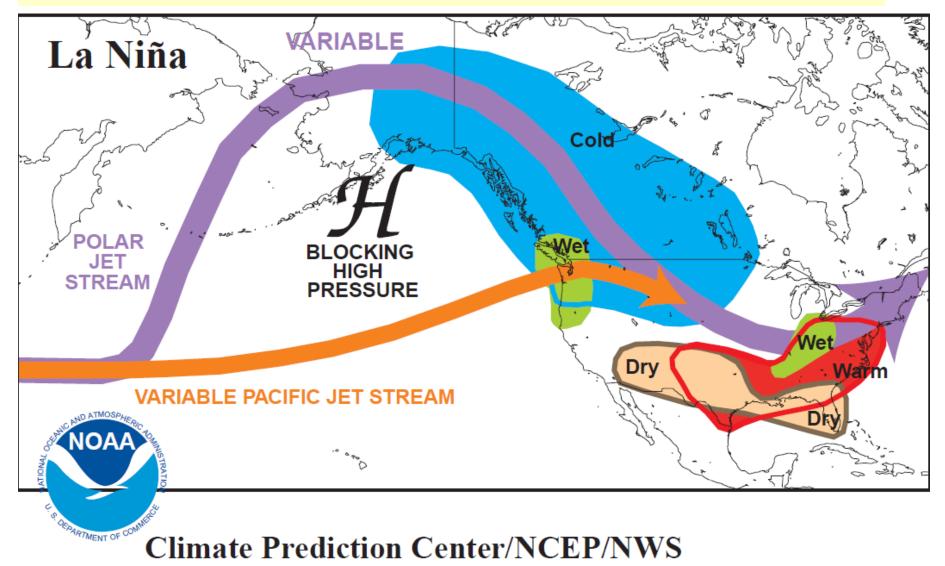
What does this mean for wildfires?

No, NPR, it is not heat. It is the PDO, the 60-year weather event of rainfall and drought driven by Pacific Ocean Temperature Cycles. You can look it up here, <u>https://casf.me/el-nino-and-la-nina-</u> <u>controls-rainfall-and-drought-in-western-usa/</u>

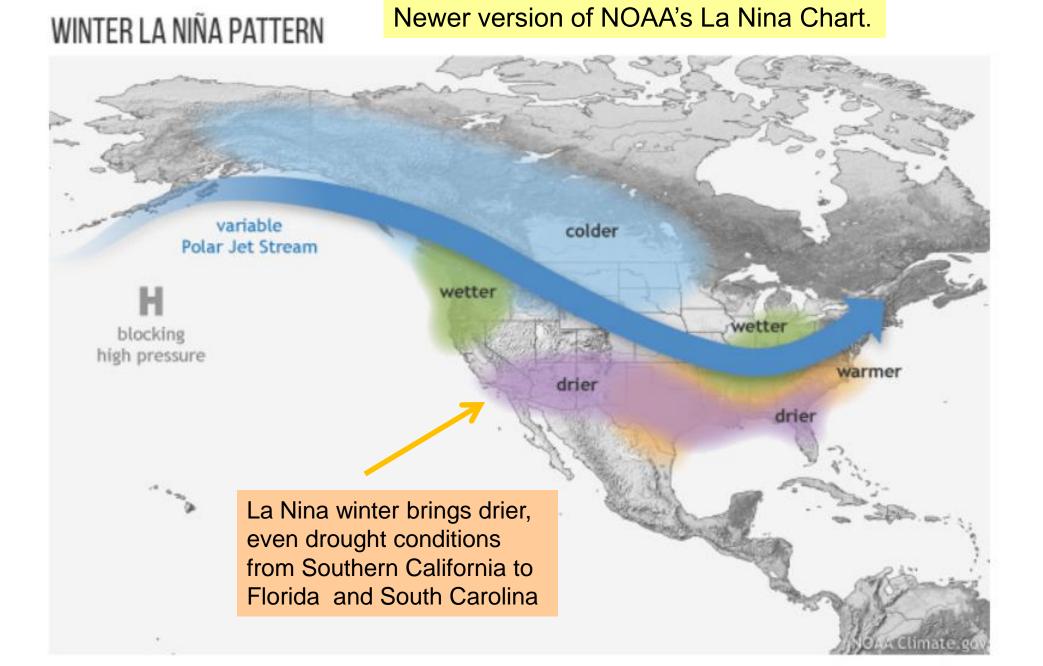
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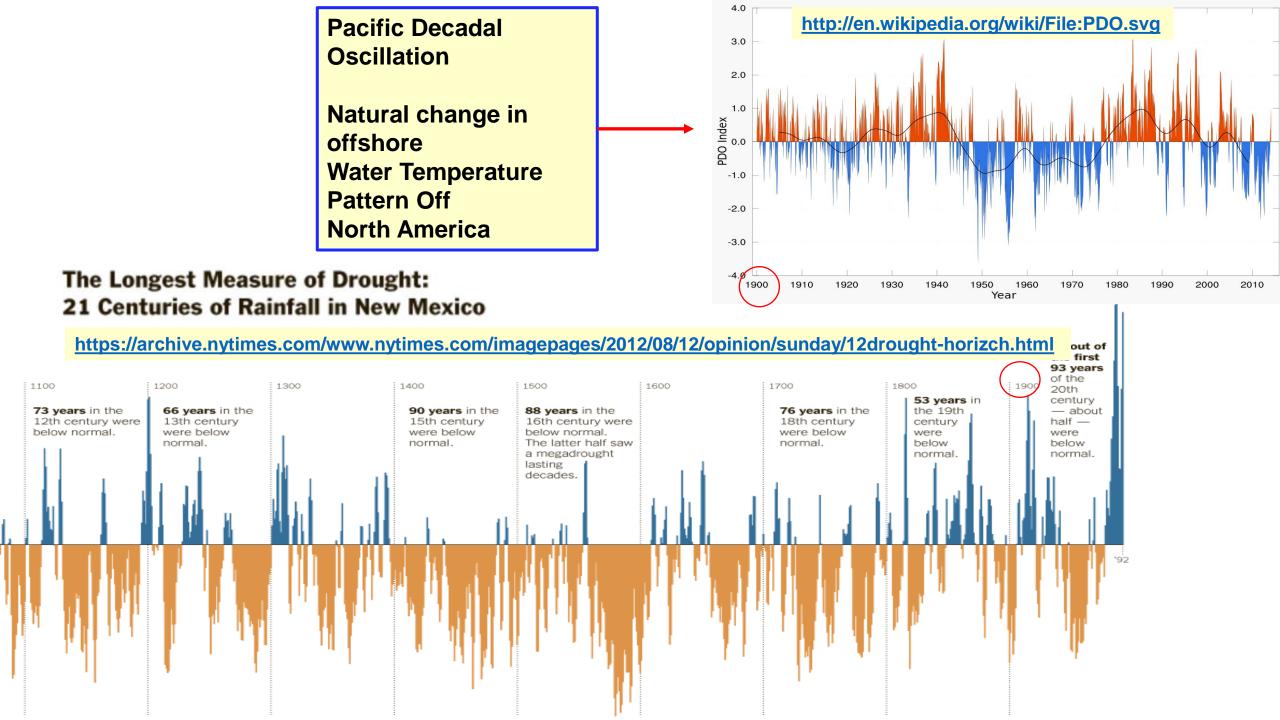
El Nino's counterpart is La Nina. Graphic from ca 2014 http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensocycle/ nawinter.shtml

La Nina results in dry from ~Arizona to Florida



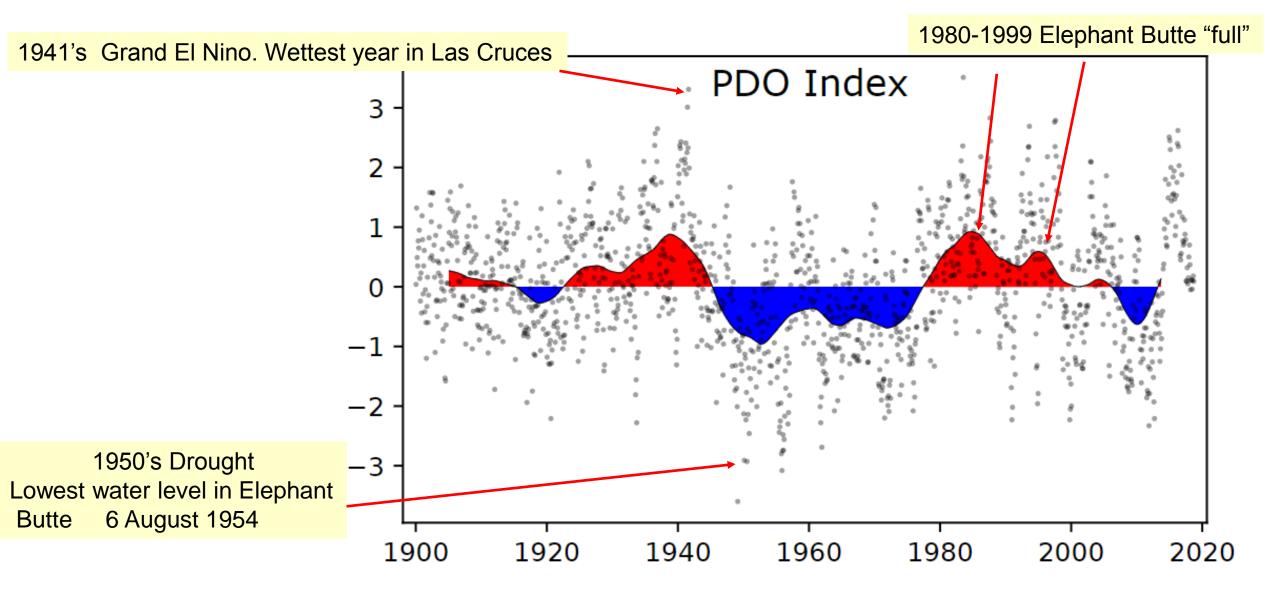
https://www.climate.gov/sites/default/files/LaNin%CC%83a_winter_flat_updated_620_0.png





Some New Mexico climate markers from the historical records

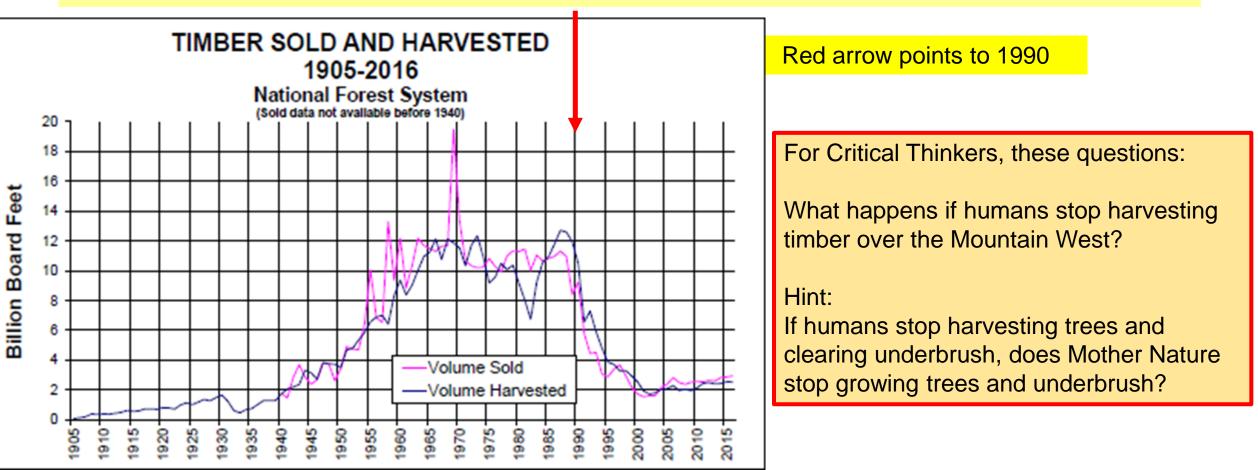
https://upload.wikimedia.org/wikipedia/commons/0/09/PDO.svg



1990s Spotted Owl controversy

- Spotted Owl listed as a threatened species under the Endangered Species Act in 1990 throughout its range in northern California, Oregon, and Washington.
- 1991 Court order halted logging on national forests in those states on grounds those forests were prime spotted owl habitats.
- Logging all but stopped on western forests as the graph shows.

Precipitous logging decline after 1990 is especially telling.

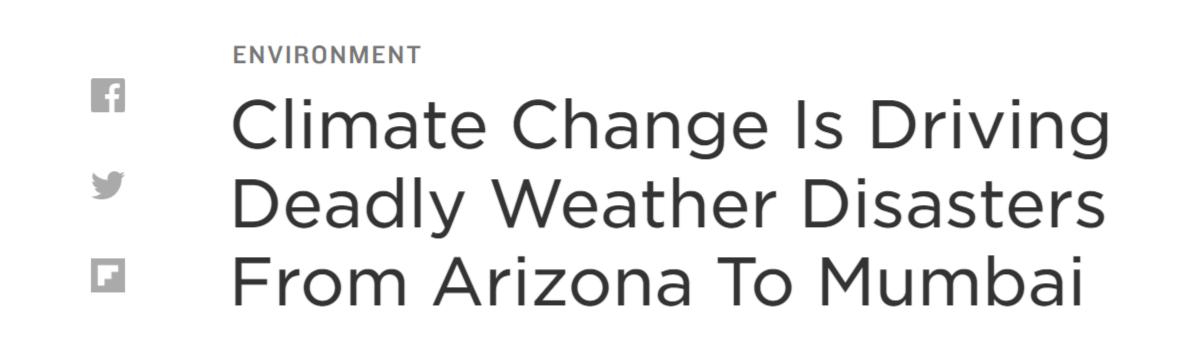


https://www.npr.org/2021/07/29/1022241936/climate-change-is-driving-deadly-weather-disasters-from-arizona-to-mumbai





Story is from 29 July 2021, almost a year ago.



https://www.npr.org/2021/07/29/1022241936/climate-change-is-driving-deadly-weather-disasters-from-arizona-to-mumba

The remains of a burned home are seen in the Indian Falls neighborhood of unincorporated Plumas County, California on July 26, 2021. Extreme weather events have claimed hundreds of lives worldwide in recent weeks, and upcoming forecasts for wildfire and hurricane seasons are dire. Josh Edelson/AFP via Getty Images



The country is experiencing yet another heat wave this week. Is it just us or is this summer unusual?

It's not just our memories — this past June was the hottest June recorded in the U.S. in more than a century, about four degrees hotter on average. Heat waves (like in the <u>Pacific Northwest</u>) can be deadly, and many cities are just realizing now how underprepared they are to deal with them. The country is experiencing yet another heat wave this week. Is it just us or is this summer unusual?

It's not just our memories — <u>this past June was the hottest June</u> <u>recorded in the U.S. in more than a century, about four degrees</u> <u>hotter on average.</u> Heat waves (like in the <u>Pacific Northwest</u>) can be deadly, and many cities are just realizing now how underprepared they are to deal with them.

Think critically about the part above I have *underlined and in italics*.

Over a century ago, it was hotter, with a lot less CO2 in the air. NPR blurts out the truth.

Based on climate history, the notion that <CO2> controls temperature is FALSE.

Shows the notion that humans can control the temperature of the Earth, also FALSE.

What does a hotter Earth have to do with flash flooding?

It's been a wild few weeks for flash flood disasters, from Central China to western Europe to Mumbai to Arizona. These fast-moving waters have killed hundreds of people, but they're not a surprise to climate scientists, who have been sounding the alarms for years.

Even though these floods happened around their world, their root cause was the same: extreme rain. And it's getting more common as the Earth gets warmer (hot air + hot water = more moisture in the air).

Here is the question, again.

What does a hotter Earth have to do with flash flooding?

Answer:

Nothing, If you look at the data.

What follows are data from NOAA, (US) and from England, probably the best weather data sets in the business.

Next charts show NPR's assertions are FALSE, if we actually look at the weather records.

US Rainfall Records confound the "heavy rainfall is increasing" claim

Right: the record book for extreme precipitation in the US.

There are no recent records set in the Continental US.

The 24-hour record was set in 1979.

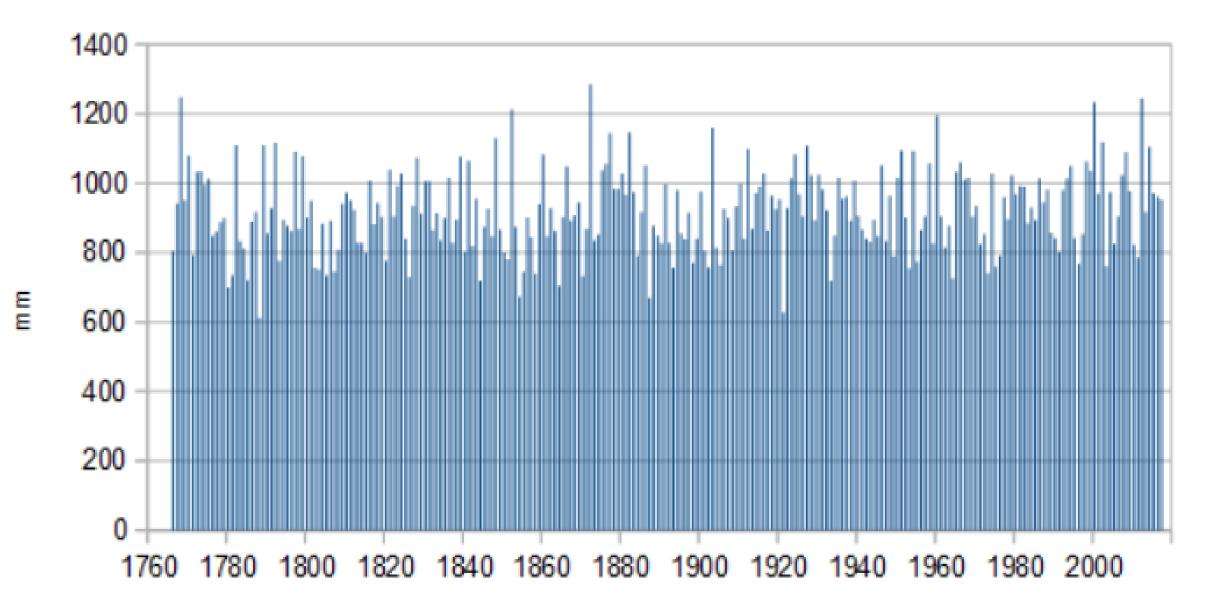
1-minute, 1956 5-minute, 1960

Extreme Weather: A Guide & Record Book -Christopher C. Burt – Google Books

U.S. Record Point Rainfalls							
Time	Rainfall	Location	Date				
1 minute	1.23"	Unionville, MD	7/4/1956				
5 minutes	2.03"	Alamogordo Creek, NM	6/5/1960				
12 minutes	2.30"	Embarrass, WI	5/28/1881				
15 minutes	3.95"	Galveston, TX	6/4/1871				
30 minutes	7.00"	Cambridge, OH	7/16/1914				
40 minutes	9.25"	Guinea, VA	8/24/1906				
42 minutes	12.00"	Holt, MO	6/22/1947*				
1 hour	13.80"	Central WV	5/4-5/1943				
1 hour 30 minutes	14.60"	Central WV	5/4-5/1943				
2 hours	15.00"	Woodward Ranch, (D'Hanis) TX	5/31/1935				
2 hours 30 minutes	19.00"	Rockport, WV	7/18/1889				
2 hours 45 minutes	22.00"	Woodward Ranch, (D'Hanis) TX	5/31/1935*				
3 hours	28.50"est.	Smethport, PA	7/18/42*				
4 hours 30 minutes	30.70"	Smethport, PA	7/18/42*				
12 hours	34.30"	Smethport, PA	7/17-18/1942				
18 hours	36.40"	Thrall, TX	9/9/1921				
24 hours	43.00"	Alvin, TX	7/25-26/1979				
4 days	62.00"	Kukaiau, Hamakua, HI	2/27-3/2/1902				
8 days	82.00"	Kukaiau, Hamakua, HI	2/27-3/6/1902				
1 month	148.83"	Mt. Waialeale, Kauai, HI	3/1982				
1 month (mainland)	71.54"	Helen Mine, CA	1/1909				
1 year	704.83″	Kukui, Kauai, HI	1982				
1 year	332.29"	MacLeeod Harbor, AK	1976				
1 year (mainland)	204.12"	Laurel Mountain, OR	1996				
*constitutes a world record							

https://notalotofpeopleknowthat.files.wordpress.com/2018/01/image28.png

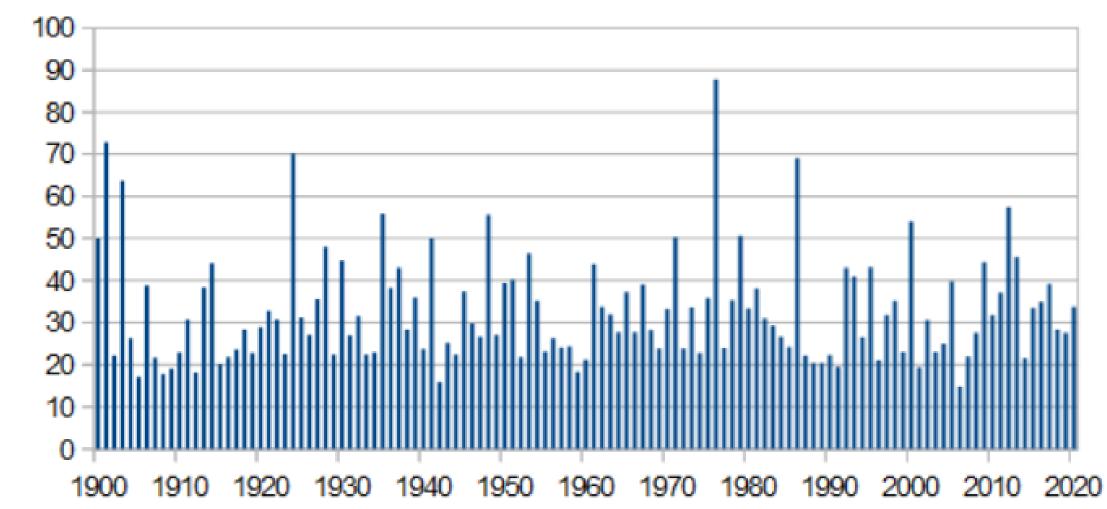
England & Wales Annual Rainfall 1766 - 2017



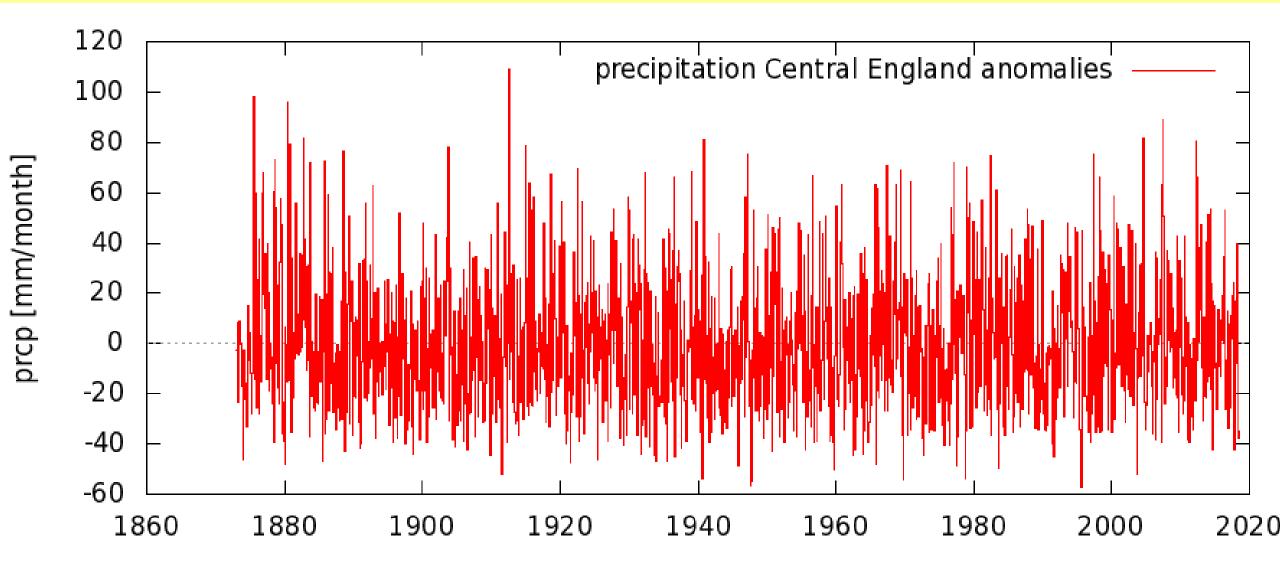
https://notalotofpeopleknowthat.wordpress.com/2021/02/04/uk-daily-rainfall-extremes-2/

Highest One-Day Precipitation at Durham

1900 to 2020



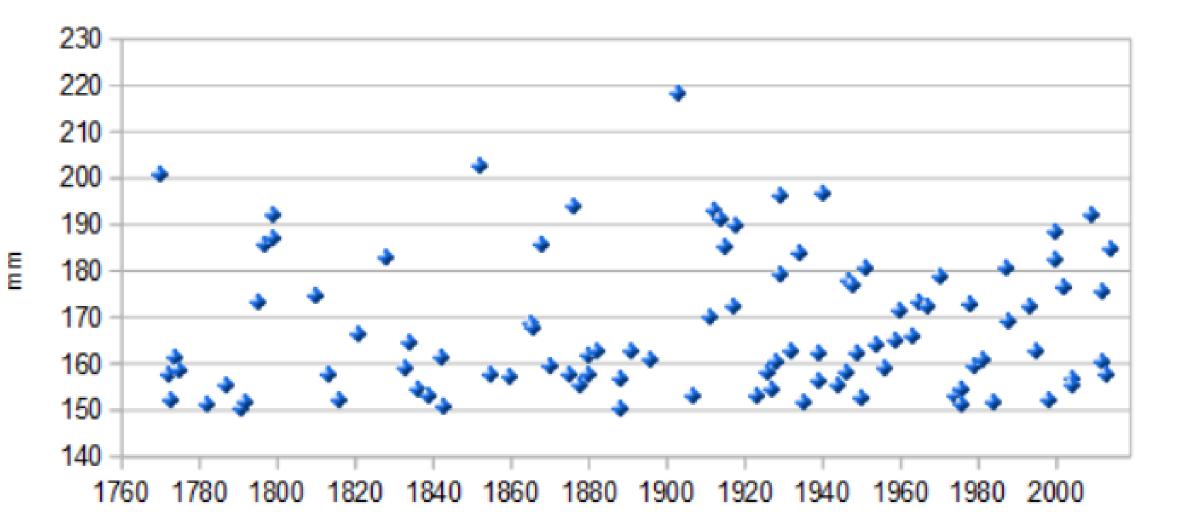
E



https://notalotofpeopleknowthat.files.wordpress.com/2018/01/image28.png

England & Wales Precipitation 1766 to 2017

Months >150mm



https://www.npr.org/2021/07/02/1012467409/hundreds-are-believed-to-have-died-during-thepacific-northwest-heat-wave



MPR SHOP



Story is from 2 Jul 2021, almost a year ago

NATIONAL

f Hundreds Are Believed To Have Died Y During The Pacific Northwest Heat Wave

July 2, 2021 · 7:51 AM ET

"An executive order issued in March 2020 by Oregon Gov. Kate Brown would formalize protecting workers from heat, but it is coming too late for the dead farmworker. Brown's order focuses on reducing greenhouse gas emissions and also tells the Oregon Health Authority and Oregon OSHA to jointly propose standards to protect workers from excessive heat and wildfire smoke." (Bolding added)

5

Cliff Mass Weather Blog

This blog discusses current weather, weather prediction, climate issues, and current events

July 05, 2021

Was Global Warming The Cause of the Great Northwest Heatwave? Science Says No.

Bob Comments:

Cliff Mass is professor of Atmospheric Sciences at the University of Washington. IMHO, he is a "Lukewarmer," like many of us, and quite unlike the Climate Crazy Prof at Penn State, Michael Mann.

There is much good information in Cliff Mass' Blog, and I will only touch on the high points of his introductory paragraph in the following graphics. They are important.

I strongly recommend you read his entire post, link at the top.

https://cliffmass.blogspot.com/2021/07/was-global-warming-cause-of-great.html Was Global Warming The Cause of the Great Northwest Heatwave? Science Says No. Synopsis

- Society needs accurate information in order to make crucial environmental decisions.
- Unfortunately, there has been a substantial amount of miscommunication and *unscientific handwaving* about the recent Northwest heatwave, and this blog post uses rigorous science to set the record straight. (Bolding, Italics, added)

First, the specific ingredients that led to the heatwave are discussed, including a high-amplitude ridge of high pressure and an approaching low -pressure area that "supercharged" the warming.

Was Global Warming The Cause of the Great Northwest Heatwave? Science Says No. Synopsis

Second, it is shown that global warming only contributed a small about (1-2F) of the 30-40F heatwave and that proposed global warming amplification mechanisms (e.g., droughts, enhanced ridging/high pressure) cannot explain the severe heat event.

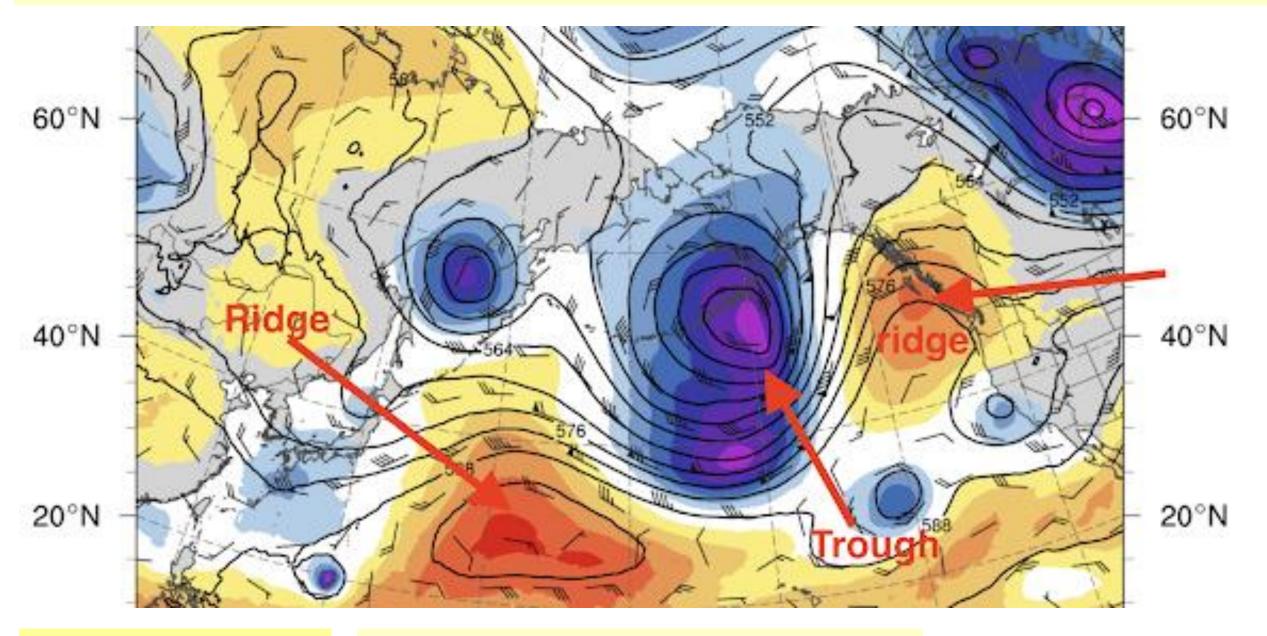
It is shown that high-resolution climate models do not produce more extreme high temperatures under the modest global warming of the past several decades and that global warming may even work against extreme warming in our region.

Importantly, this blog demonstrates that there is no trend towards more hightemperature records.

Was Global Warming The Cause of the Great Northwest Heatwave? Science Says No. Synopsis

Finally,

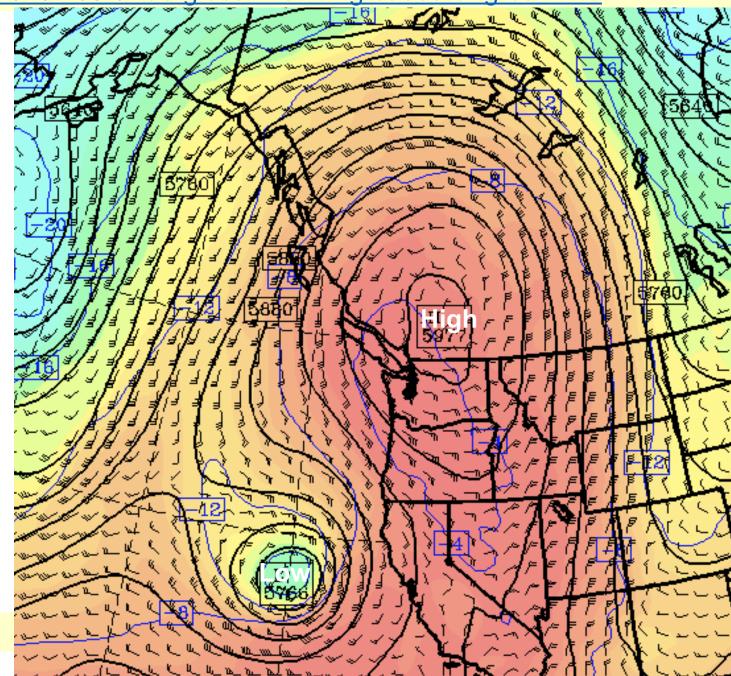
the communication of exaggerated and unfounded claims by the media, some politicians, and several activists are discussed.



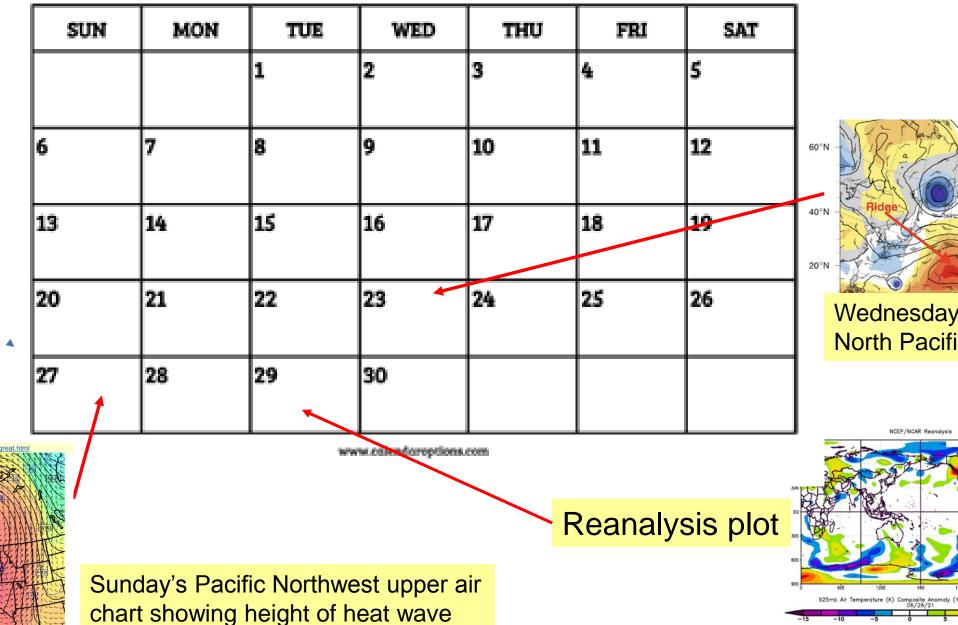
North Pacific Chart Wednesday, June 23rd 2021, 500 mb

Pacific Northwest Chart Maximum Intensity of the heat wave.

1800Z Sunday, June 27th, 2021, 500 Mb



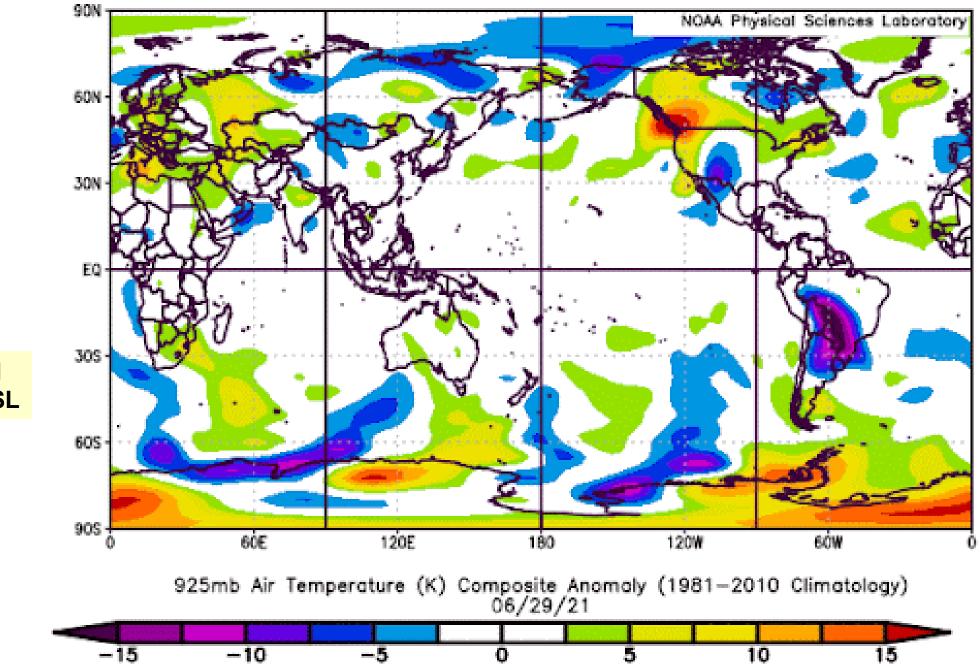
JUNE 2021



Wednesday 22 Jup 2021

Wednesday 23 Jun 2021 North Pacific Plot

NCEP/NCAR Reanalysis



Reanalysis Chart

Tuesday 29 Jun 2021 925 mb or 2500 ft MSL

https://www.ncdc.noaa.gov/extremes/scec/records



 $\sqrt{\mathbf{v}}$ NOAA Satellite and Information Service National Environmental Satellite, Data, and Information Service (NESDIS)



DOC > NOAA > NESDIS > NCDC

Search Field:

Search NCDC

Climate Monitoring • U.S. and Global Extremes •

Source of extreme high temperature records, as of 2021.

All-Time Record Maximum Temperature by State

State	Location	Value	Date	Station ID	Status*
AL	Centerville	112 ° F	September 6, 1925	011520	E
AZ	Lake Havasu City	128 ° F	June 29, 1994	024761	E
AR	Ozark	120 ° F	August 10, 1936	035508	E
CA	Greenland Ranch	134 ° F	July 10, 1913	043603	E
со	Sedgwick Las Animas	114 ° F	July 11, 1954 July 1, 1933	057513 054834	N1A
СТ	Torrington Danbury	106 ° F	August 23, 1916 July 15, 1995	068438 061762	E1
DE	Millsboro	110 ° F	July 21, 1930	076020	E
FL	Monticello	109 ° F	June 29, 1931	085879	E

Next:

- The new look for NOAA's extremes records page
- Records Page Extracts for this topic.





Home / Climate Monitoring / SCEC / Records

May US Release: Wed, 8 Jun 2022, 11:00 AM EDT

https://www.ncdc.noaa.gov/extremes/scec/records/all/tmax

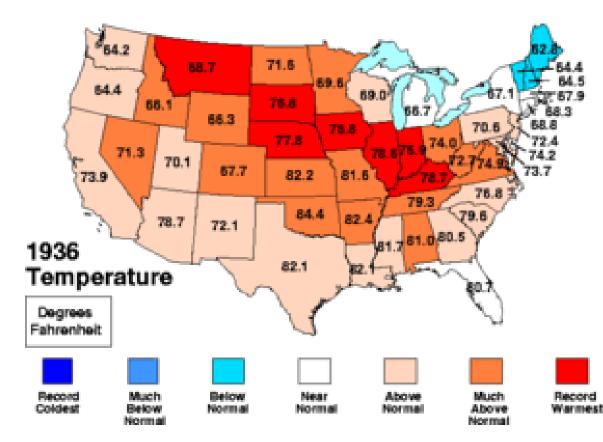
Overvi	ew Operational [Details	Reports	Elements Tracked	Records	
State	Element	Value	Date(s)	Location	Station ID	Status
Alabama	Maximum Temperature	112°F	September 6, 1925	Centerville	011520	E
Alaska	Maximum Temperature	100°F	June 27, 1915	Fort Yukon	26413	E
Arizona	Maximum Temperature	128°F	June 29, 1994	Lake Havasu City	024761	E
Arkansas	Maximum Temperature	120°F	August 10, 1936	Ozark	035508	E
California	Maximum Temperature	134°F	July 10, 1913	Greenland Ranch	043603	E
Colorado	Maximum Temperature	115°F	July 20, 2019	John Martin Dam	054388	NA

https://www.ncdc.noaa.gov/extremes/scec/records/all/tmax

	NORR	National Centers for Environmental Information National Oceanic and Atmospheric administration		e Climate Extreme mittee (SCEC)		Ionitoring Products	Q	
	Home / Clin	nate Monitoring / SCEC / Records			May US Rel	lease: Wed, 8 Jun 2022, 1	L:00 AM EDT	
	C	Overview Operational D	etails	Reports	Elements Tracked	Records		
	Reco	ords 😨						
Mar	ryland	Maximum Temperature	109°F	July 10, 1936	Cumbe	erland	182280	E3
				July 10, 1936	Free	derick	183348	E3
"The country is experiencing yet another heat wave this week. Is it just us or is this summer unusual?"			August 7, 1918	Cumbe	erland	182280	E3	
			August 6, 1918	Cumbe	erland	182280	E3	
C	Quote fro	m NPR		August 6, 1918	Keedy	/sville	184780	E3
				July 3, 1898	Boettche	erville	180960	E3

From Wikipedia: 1936 North American heat wave

The **1936 North American heat wave** was the most severe heat wave in the modern history of North America. It took place in the middle of the Great Depression of the 1930s, and caused catastrophic human suffering and an enormous economic toll. The death toll exceeded 5,000, and huge numbers of crops were destroyed by the heat and lack of moisture. Many state and city record high temperatures set during the 1936 heat wave still stand to this day.



Summer (June–August) 1936 Temperature,

in degrees Fahrenheit. Record warmest and coldest is based on a 112 yr period of records, 1895-2006



Arizona	Maximum Temperature	128°F	June 29, 1994	Lake Havasu City	024761	E
Nevada	Maximum Temperature	125°F	June 29, 1994	Laughlin	264480	E
New Mexico	Maximum Temperature	122°F	June 27, 1994	Waste Isolation Pilot Plant (nr. Loving)	299569	E
Texas	Maximum Temperature	120°F	June 28, 1994	Monahans	415999	E1
			August 12, 1936	Seymour	418221	E1

*** Record Highs are caused by heat wave episodes, not <CO2>

27 June 1994, Waste Isolation. Pilot Plant, New Mexico: High temperatures in the Southwest as New Mexico sets its hottest temperature ever: 122°F (50 °C).

27 June 1994, *Tipton, Oklahoma***:** All-time record temperatures for the state tied at Tipton: 120°F (48.9 °C).

28 June 1994, *Monahans, Texas*: All-time record temperatures for the state tied at Monahans: 120°F (48.9 °C).

29 June 1994, *Arizona and Nevada*: Persistent extreme heat in the Southwest as Arizona — 128°F (53.3 °C) at Lake Havasu City — and Nevada —125°F (51.7 °C) at Laughlin — set all-time record high temperatures on the same date.

н

"Forecasters said a vast bubble of hot air had stalled over the Southwest, toppling heat records from the Southern California desert to Texas and Oklahoma."

--New York Times, 30 June 1994

Schematic diagram of "Blocking High" Heat Wave winds aloft pattern:



National Centers for Environmental Information

State Climate Extremes Committee (SCEC)

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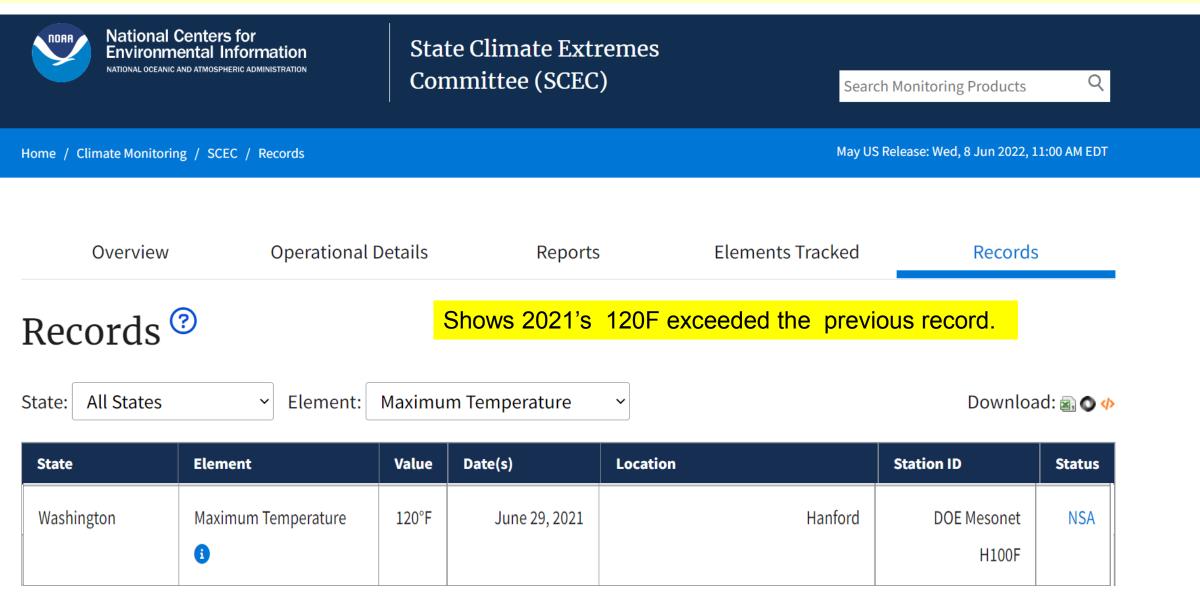
May US Release: Wed, 8 Jun 2022, 11:00 AM EDT

Overview	Operational Details	Reports	Elements Tracked	Records	

Records Another Example that Extreme Maximum Temperatures occur during weather events. I was stationed at LG Hanscom Field, Bedford, MA and was out canoeing with family, first Saturday in August 1975. High Pressure with westerly winds prevented sea breezes from developing. New Extreme Max Temperatures in MA and RI occurred during that event.

State	Element	Value	Date(s)	Location	Station ID	Status	
Massachusetts	Maximum Temperature	107	°F August 2,	1975	Chester	191430	E2
			August 2,	, 1975	New Bedford	195246	E2
Rhode Island	Maximum Temperature	104	•°F August 2,	, 1975	Providence	14765	E

National Centers for Environmental Information National Oceanic and Atmospheric Administration		State Climate Extremes Committee (SCEC)			Search Monitoring Products Q		
Home / Climate Monitori	ng / SCEC / Records		May US Release: Wed,	May US Release: Wed, 8 Jun 2022, 11:00 AM EDT			
Overview Records	Despite all the CO2 hoopla, data show 2021's 119F						
State: All States					Download: 🗟 🕥 🚸		
Oregon	Maximum Temperature	119°F	June 29, 2021	Moody Farms Agrimet	USBR Mesonet	SA	
	3		June 29, 2021	Pelton Dam	356532	SA	
			August 10, 1898	Pendleton	356541	E1	





National Centers for Environmental Information

State Climate Extremes Committee (SCEC)

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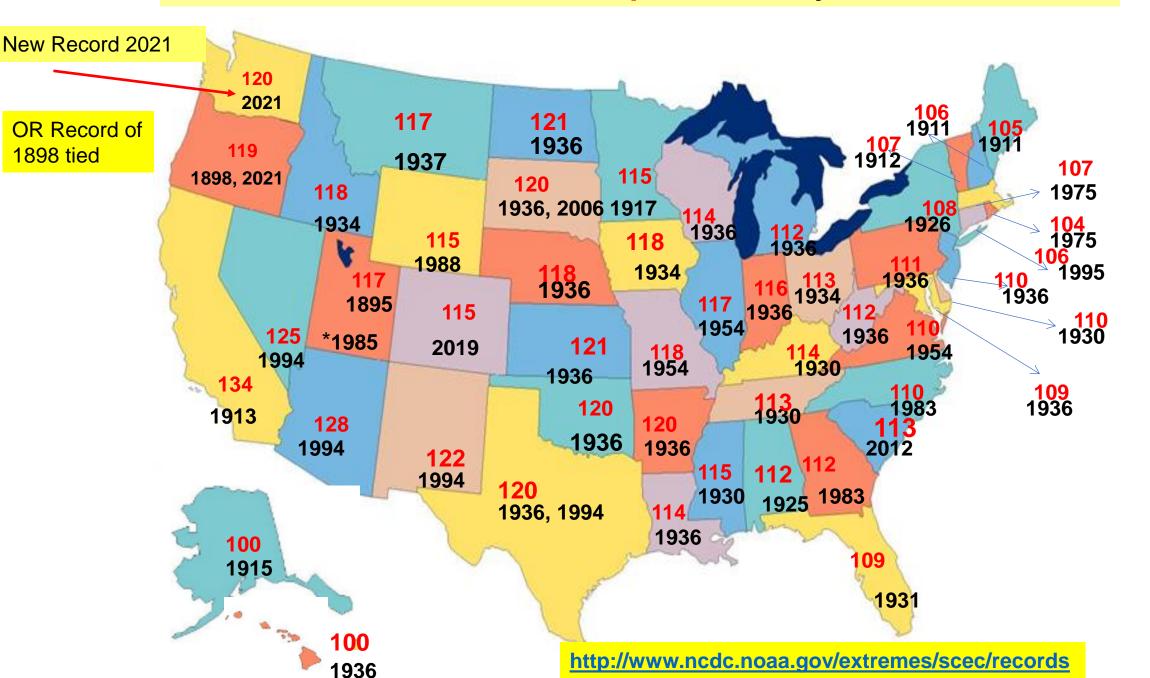
Home / Climate Monitoring / SCEC / Records

May US Release: Wed, 8 Jun 2022, 11:00 AM EDT

- N Value is changed from extremes tables last updated by NCEI (formerly NCDC) between 1998 and 2006. Value exceeds all other valid values.
- **S** Value has been officially reviewed by a State Climate Extremes Committee.
- A Additional information is available. Official value may be exceeded by a widely accepted unofficial value that is not supported by a direct, calibrated observation (e.g., estimates, uncalibrated instruments, anecdotal reports).



US. Record Maximum Temperature F by State and Year





National Centers for Environmental Information

State Climate Extremes Committee (SCEC)

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May Global Release: Tue, 14 Jun 2022, 11:00 AM EDT

Home / Climate Monitoring / SCEC / Records

Unclear why this date changes

Overview	Operational Details	Reports	Elements Tracked	Records
Records ^(?)	I read earlie	ous 117F dated or that 1985's 11 orstate 15 near S	7F was set at the rest	
State: All States	 Element: Maximum Ter 	mperature ~		Download: 🗟 👁 🚸

State	Element	Value	Date(s)	Location	Station ID	Status
Utah	Maximum Temperature	117°F	July 5, 1985	St. George	427516	EA

Utah Maximum Temperature Records Status

Comment

The wording of this explainer does not make sense to me.

Anyone care to comment?

E Value is unchanged from previous extremes tables last updated by NCEI (formerly NCDC) between 1998 and 2006. Value exceeds all other valid values.

Locations without associated station IDs are not archived in NCEI's digital data collection. They may be derived from historical documents (official or otherwise) in NCEI archives or may be archived elsewhere. Please contact NCEI at <u>NCEI.Monitoring.Info@noaa.gov</u> for more information.

It's the Sun, Stupid.

http://notrickszone.com/2019/03/25/satelliteevidence-affirms-solar-activity-drove-a-significant -percentage-of-recent-warming/

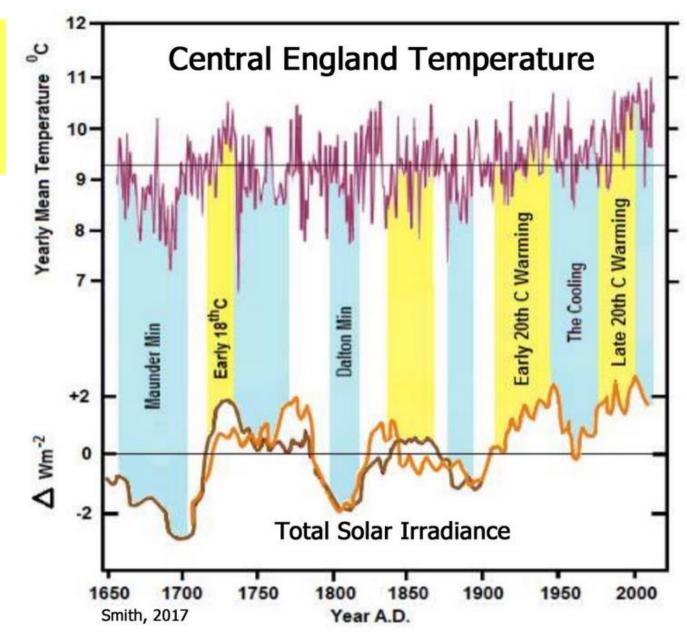
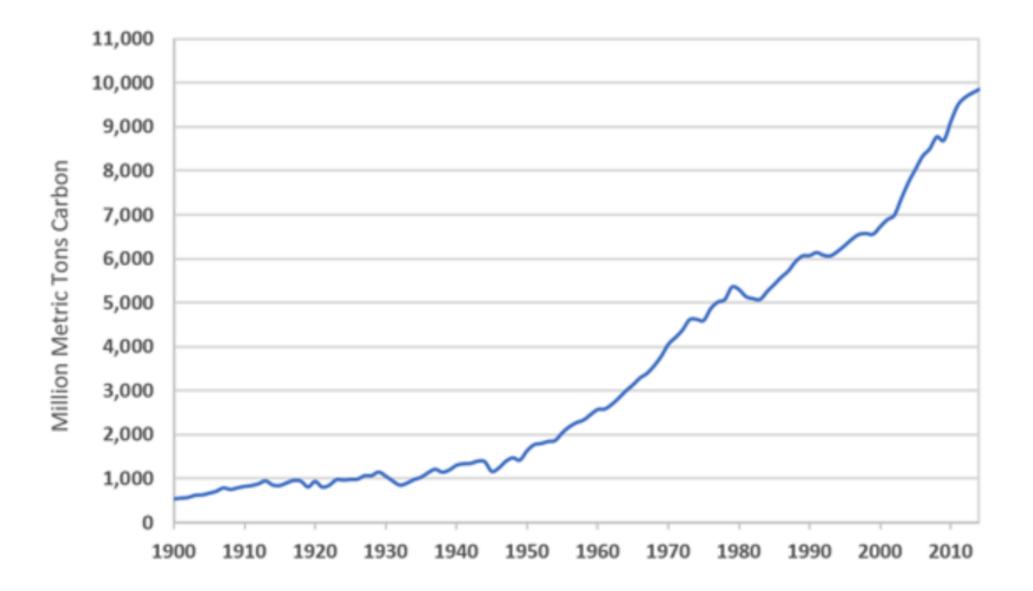
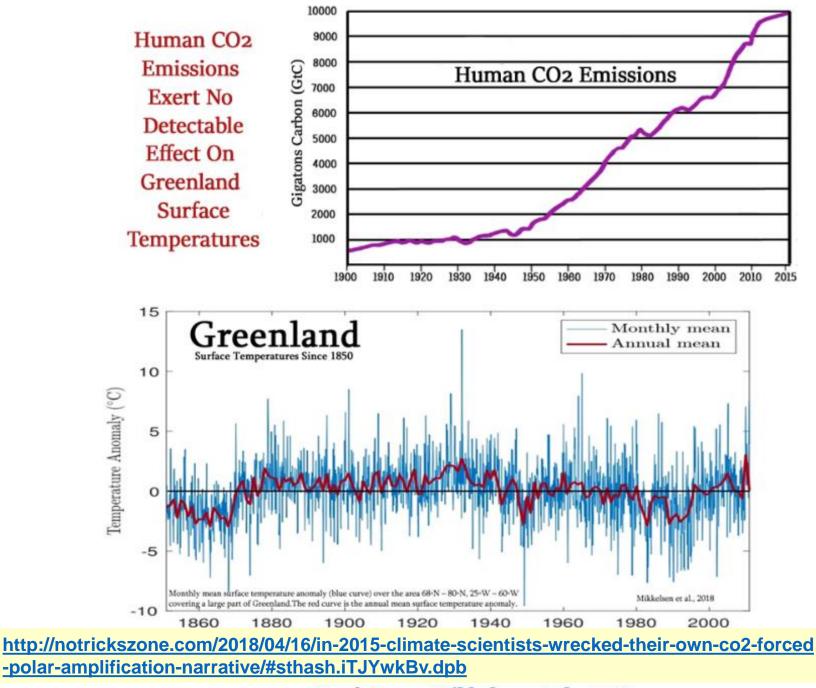


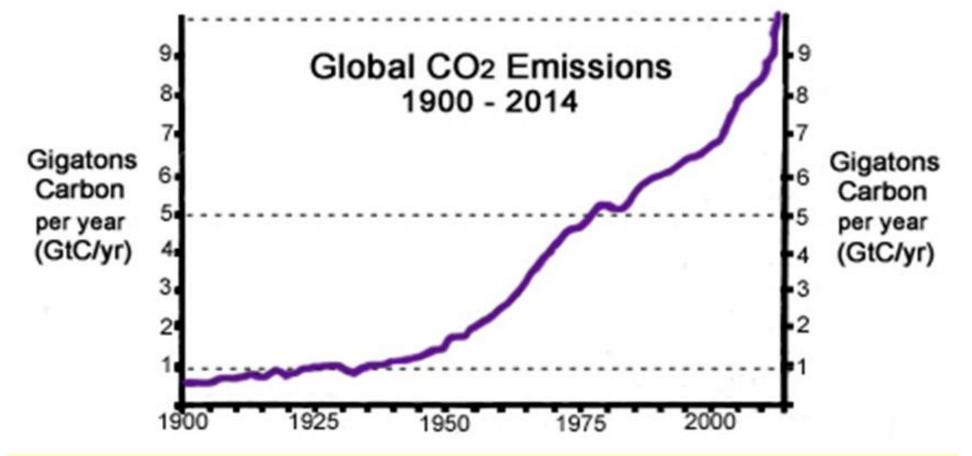
Image Source: Smith, 2017

Global Carbon Emissions from Fossil Fuels, 1900-2014





Graph Source: Mikkelsen et al., 2018



Anthropogenic CO2 emissions plodded along steadily at about 1 GtC/year (gigatons of carbon per year) during the 1900 to 1945 period.

After 1945, human emissions exploded. They reached 4 GtC/year by the 1970s, 6 GtC/year by the 1990s, and 10 GtC/year by 2014.

http://notrickszone.com/wp-content/uploads/2016/11/CO2-Emissions-1900-2014-GtC -per-year-ps-.jpg

JGR Atmospheres

Volume 124, Issue 14

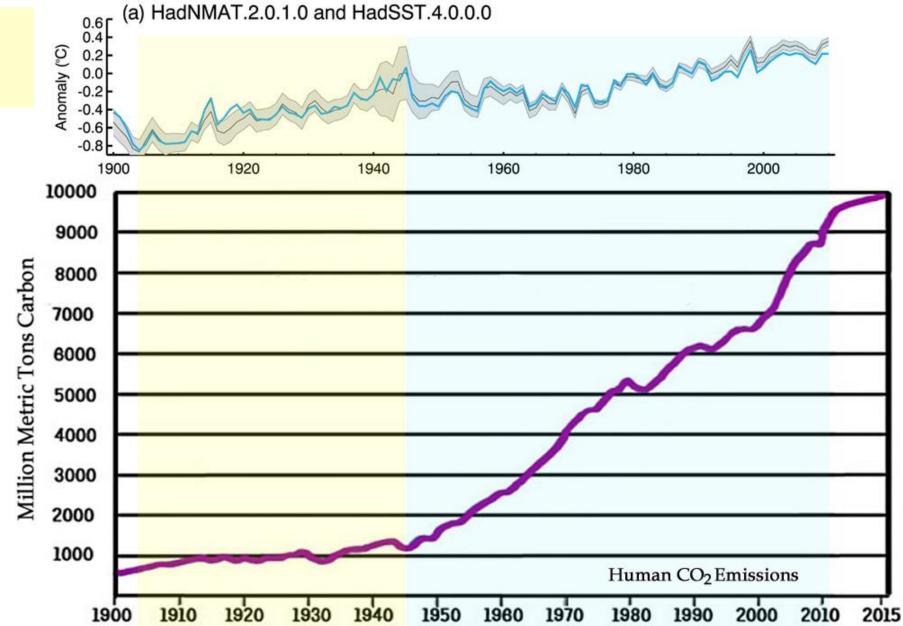
27 July 2019

An Ensemble Data Set of Sea Surface Temperature Change From (a) Collocated global annual average NMAT anomalies (°C) 1900-2010 offset by 0.15 °C (blue, relative to 1850: The Met Office Hadley Centre HadSST.4.0.0.0 Data Set

1961–1990) and global annual average sea surface temperature (SST) anomalies from HadSST.4.0.0.0 (black

J. J. Kennedy 🕿 N. A. Rayner, C. P. Atkinson, R. E. Killick

is central estimate and grey shading indicates 95% uncertainty range).



https://notrickszone.com/2022/05/16/ radiosonde-temps-show-northernhemisphere-tropical-warming-has -mostly-paused-since-1998/

JGR Atmospheres

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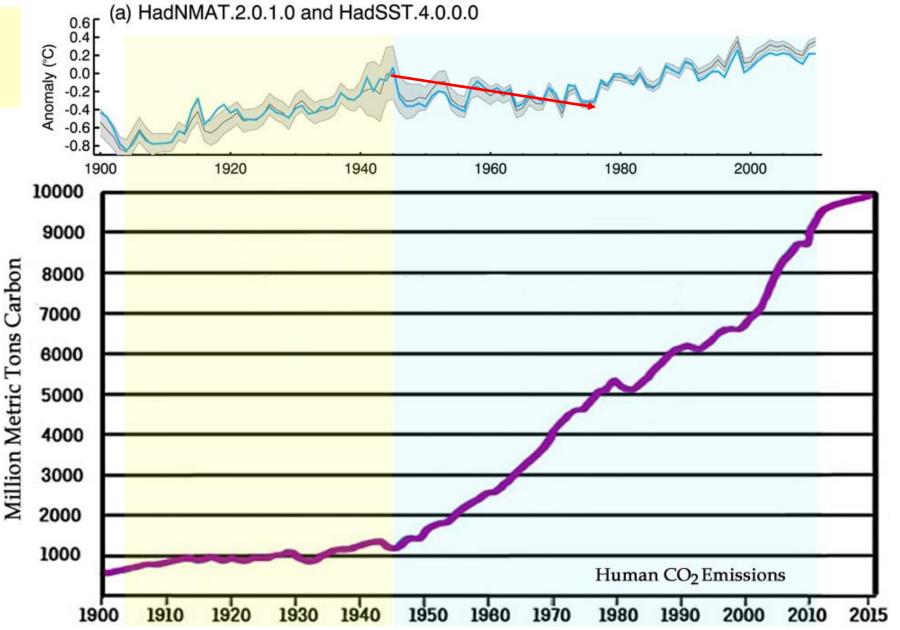
J. J. Kennedy 🕿 N. A. Rayner, C. P. Atkinson, R. E. Killick

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https://notrickszone.com/2022/05/16/ radiosonde-temps-show-northernhemisphere-tropical-warming-has -mostly-paused-since-1998/

Data from the time domain of the red arrow, 1941-1976, show clearly that as CO2 emissions were quadrupling, Sea Surface Temperatures and Night Maritime Atmospheric Temperatures were falling.

From these data, it is impossible to believe that human CO2 emissions control Earth's temperatures.



Non-Adjusted Temperature Data Appear To Correlate With 20th Century Solar Forcing

<u>Yndestad and Solheim (2017)</u> have released a reconstruction of solar activity (Total Solar Irradiance, or TSI) for 1700-2013.

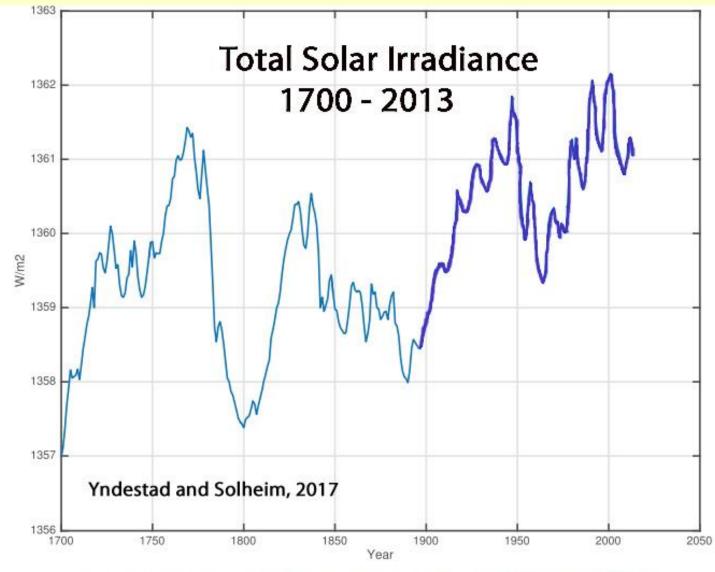
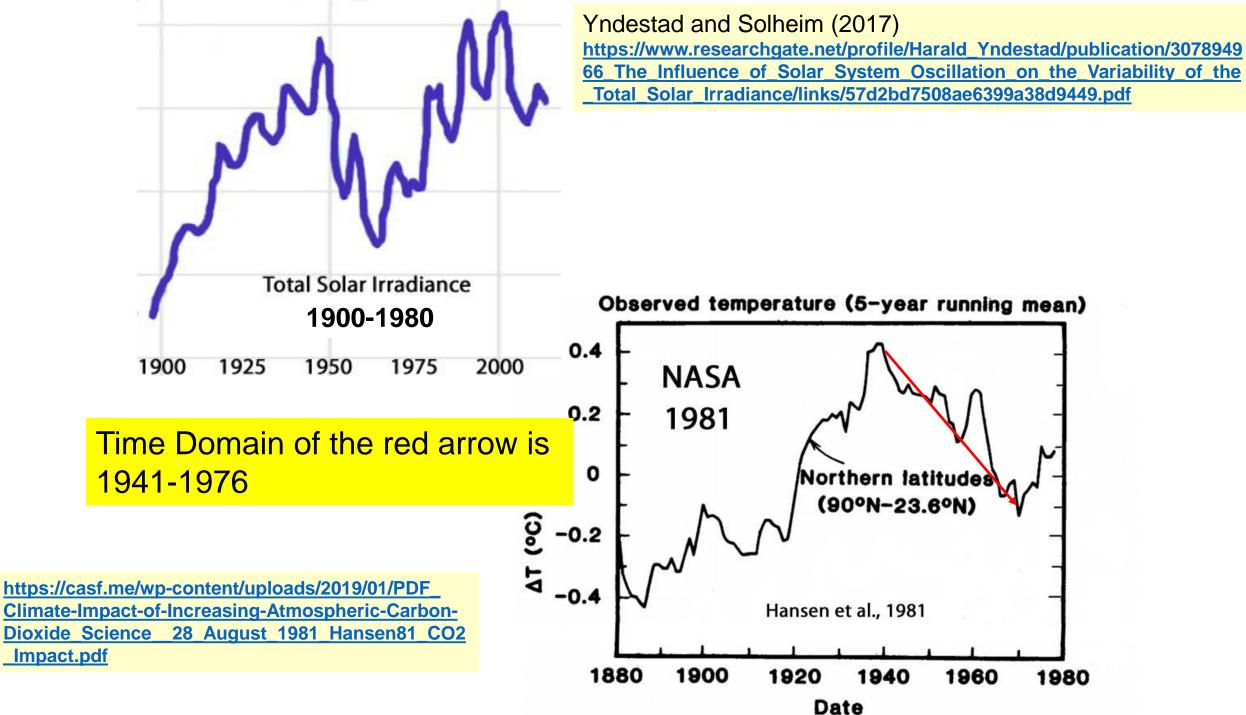
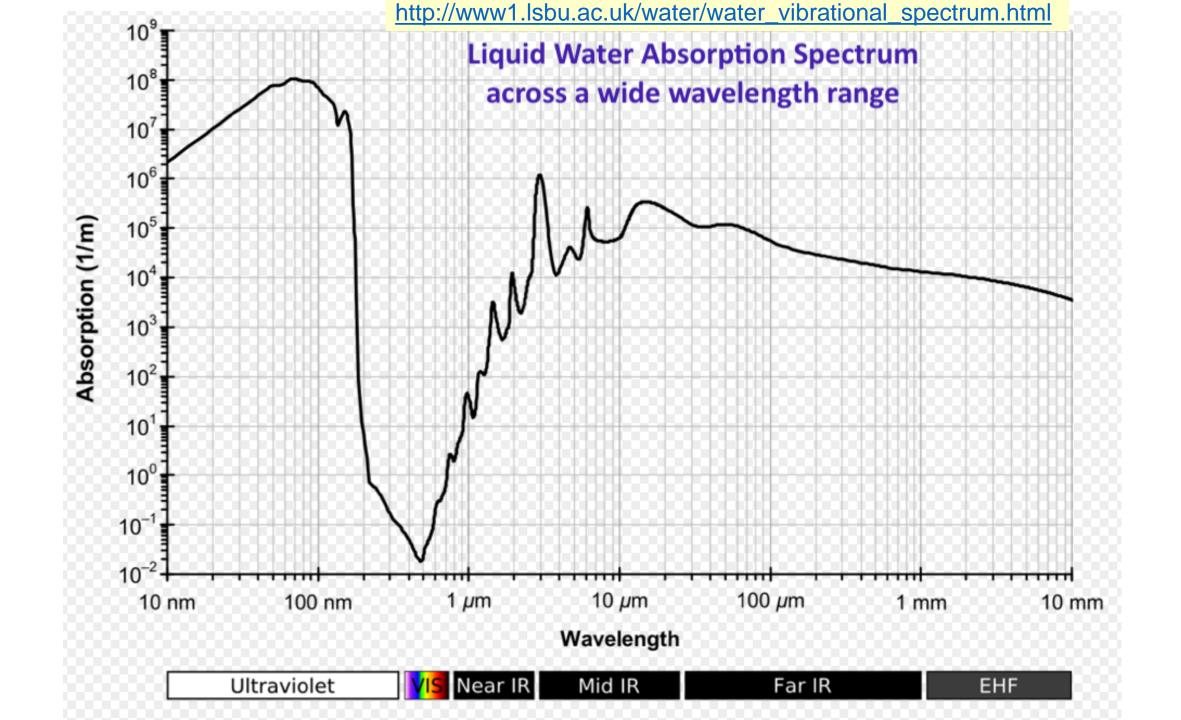


Fig. 3. TSI-HS total solar irradiance from 1700 to 2013 A.D. (Scafetta and Willson, 2014).



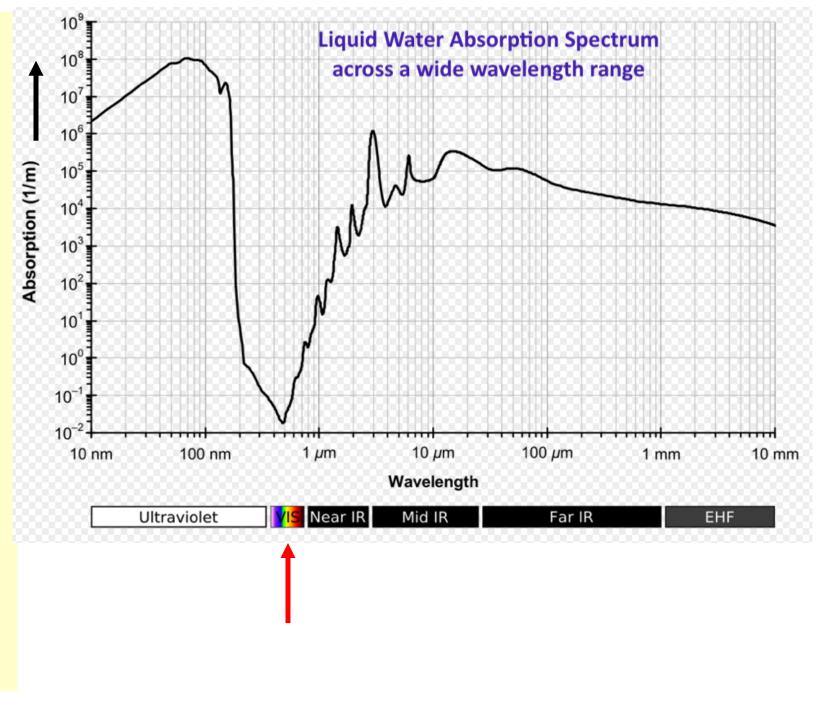


Explanation: At visible wavelengths, the colored portion of the spectrum, the sun's radiation penetrates well into the water, because the absorption coefficient is low. Light in the blue-violet portion of the spectrum penetrates easiest and deepest. Yellows and reds are absorbed more; this is responsible for the blue appearance of the water in sunlight.

Back radiation (towards earth) from increased carbon dioxide in the atmosphere, at 10.6 um and ~15 um, does not penetrate ocean, river or lake water to any appreciable depth.

Therefore, increased water temperatures over time are caused by reduced cloudiness, allowing more sunlight to heat the water over time.

More atmospheric carbon dioxide can not heat river, lake, or ocean waters.



End Note

A Russian scientist, (Pokrovsky, 2019) shows that as Cloud Cover Decreases, Temperature Increases. http://joannenova.com.au/2019/11/new-study-settles-it-global-warming-and-the-pause-was-driven-by -changes-in-cloud-cover-not-co2/



Jo Nova

#1.1.1

November 2, 2019 at 5:53 pm · Reply

Which law of physics says that heat trapped by CO2 won't be released by

changes in cloud cover? Or are you just here to drop in mindless scientificy cliches as if they mean something?

If NASA Langley has the laws of physics wrong, quick, rush, do tell them.

PS: I'd like to ask the ABC why it is that a major US database on one of the most important factors in climate change hasn't been discussed by a major US or Australian scientific research unit. Why is it that it takes a Russian to assess this critical database?

http://joannenova.com.au/2019/11/new-study-settles-it-global-warming-and-the-pause-was-driven-by-changes-in-cloud-

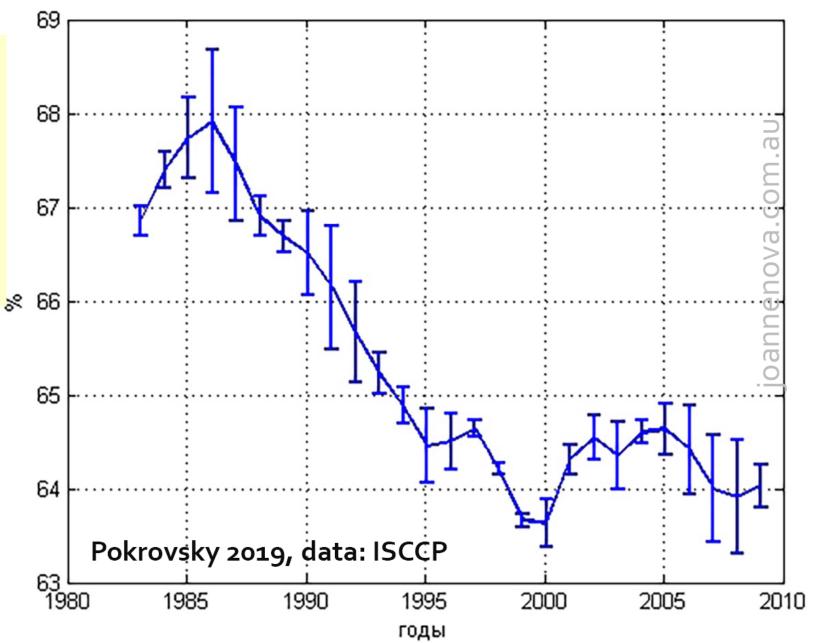
cover-not-co2/

International Satellite Cloud Climatology Project: ISCCP https://isccp.giss.nasa.gov

"The focus of the International Satellite Cloud Climatology Project is to collect weather satellite radiance measurements and to analyze them..."

Message: Global Cloud Cover decreased from 1986-2000

Percentage of Global Cloud cover



This website's content is no longer actively maintained, but the material has been kept on-line for historical purposes. The page may contain broken links or outdated information, and parts may not function in current web browsers.

Please note that ISCCP data processing is now performed at NOAA/NCEI. Please visit the <u>NOAA/NCEI website</u> for access to ISCCP H data products and other up-to-date information.

What is the International Satellite Cloud Climatology Project (ISCCP)?

What is the World Climate Research Programme (WCRP)?

What is the Global Energy and Water Experiment (GEWEX)?

PROJECT DESCRIPTION Participants & Status

> CLOUD DATA Maps & Plots Available On-Line

OTHER RELATED DATA Maps & Plots Available On-Line

DATA ANALYSIS To Understand Climate



New ISCCP H Version

New ISCCP-FH Flux Data Product

WHAT'S NEW

DATA PRODUCT DOCUMENTATION & Software Available On-Line

RELATED PROJECTS Web Sites & Data Centers

FURTHER INFORMATION

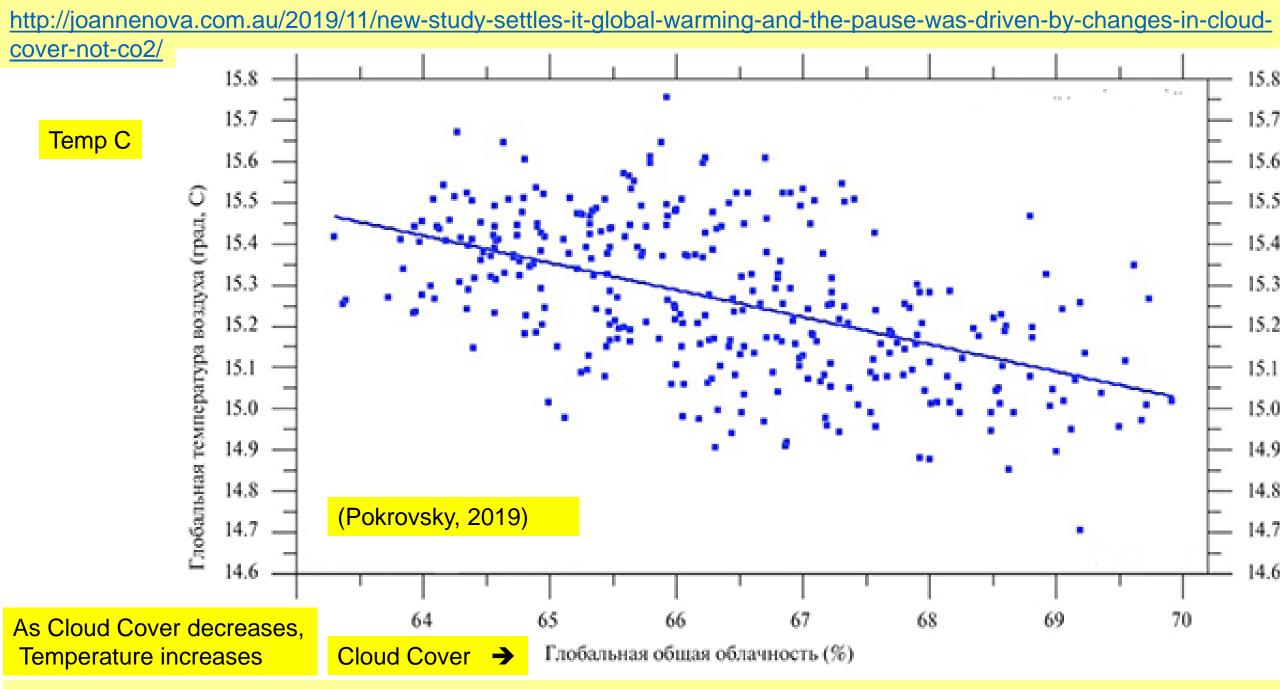


Fig. 9. Results of regression analysis of the series of global clouds (ISCCP) and surface air temperature (CRUTEM3).