

[+ Create Space](#) [Science of Everyday Life](#) [Scientists](#) [History of the United State...](#) [Military History and...](#) [Scientific Research](#) [Technology Trends](#) [Videos](#) [Science](#)

[About](#) · [Careers](#) · [Terms](#) · [Privacy](#) · [Acceptable Use](#) · [Businesses](#) · [Press](#) · [Your Ad Choices](#)

From your Digest

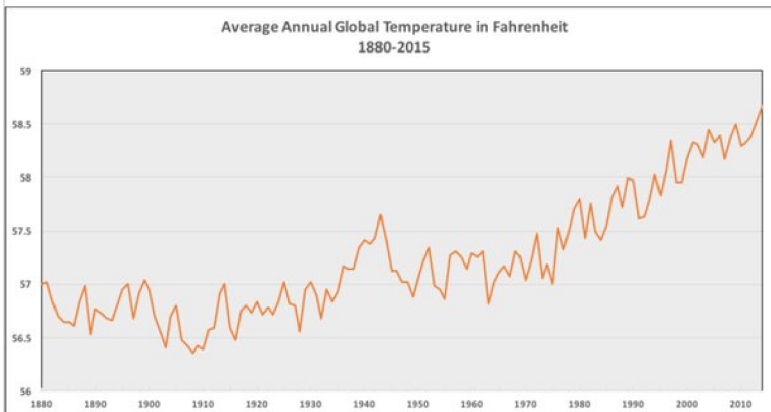
**Charles Tips** · [Follow](#)

Academic science editor · Aug 17



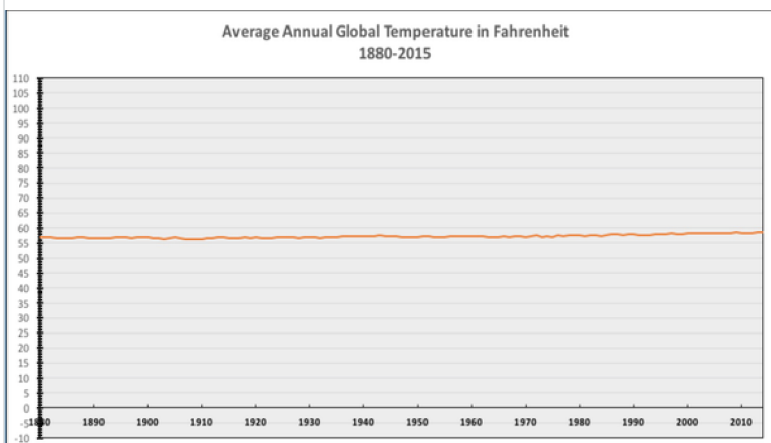
**How much higher is the "rate of temperature increase" over the past 150 years due to man-made climate change compared to earlier periods when temperature rose naturally?**

Here is a chart of mean surface temperature rise over the last century and a half:



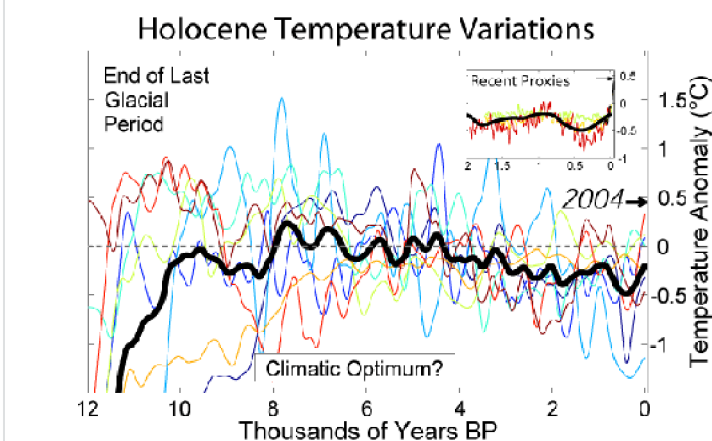
Wow! Hotter 'n' hotter!

Here is the same data at the scale of human experience of temperature on this planet:



When you don't make each half degree a centimeter thick, it doesn't look at all scary. It pays to know how to read graphs and charts.

And here we have our mean surface temp for the last eleven millennia:



The first thing to note is the steep climb to the left to the Holocene climate optimum and then the shallow descent on the right to two decades ago. The Younger Dryas was a temperature minimum quite a bit greater than the many to the right. Per



Upvote · 241



126

12



Advertisement



These sinusoidal waves result from quite predictable forcings such as sunspot activity and Milankovitch cycles. They are evidence, then, we are dealing with no unusual forcings of any significance.

The peaks are referred to as “Warms” and the valleys as “Minimums.” They are dramatically different. Warms have always been periods of agricultural bounty and civilizational advance. Minimums have been instead periods of droughts, earthquakes, volcanic activity and human migrations. This is thought to result from Warms being associated with high sunspot cycles with their greater infrared radiation and Minimums with low sunspot activity and the sun’s greater output of gamma radiation, which, being very high energy, penetrates not just us but the Earth as well.

The point marked 2004 indicates the temperature jump predicted by the many (42) different models for the original Catastrophic Anthropogenic Global Warming hypothesis of Al Gore. Note that a jump in MST of that magnitude would certainly indicate a new forcing was taking place. From there, MST leveled off (apart from the usual El Niño and La Niña effects) and has started down again as sunspot activity subsides. In other words: Nada, Nichts, Zilch, Zip.

Before you claim otherwise, do note that starting with the Holocene optimum and moving rightward, there have been ten rises to Warms (and nine downturns to Minimums). The ten rises have been fairly uniform in slope and duration, but this most recent one, the one actually associated with the industrial revolution, is the least remarkable for heat.

Some claim this year as evidence of warmth finally increasing, but... hold your horses: the Hunga Tonga volcano of last winter alone blasted enough water into our atmosphere to cause such an increase in humidity and thus temperature. Note that our recent rise in gamma radiation may have had something to do with that earthquake.

So, earth’s mean surface temperature for the last century and a half—in fact for the last eighty centuries—has been nothing out of the ordinary.

13.2K views · View 241 upvotes · View 12 shares

1 of 14 answers

126 comments from Robert Tormey and more

More from your Digest ▾



**Tactical Gloves**

Sponsored



### No more scars and painful wounds!

This outdoor tactical gloves can fully protect your hands from all sorts of threats!

21

Shop Now



Upvote · 175



**Darkest Secrets** · Follow



Posted by Agha · Nov 20



Joe Shelton · 4y

**Why do fighter pilots immediately bank after getting launched off an aircraft carrier? Wouldn't climb rate be better when wings are leveled?**

initiating an immediate turn after launch is very simply Self Preservation. [\(more\)](#)

 Upvote · 325



 1





Nordace

Sponsored



Travel Made 200% Easier With This Bundles. Check Now!

Nordace's huge discounts on travel essentials.

Learn More



 Upvote · 13







Mike Chang · [Follow](#)

Lives in New York City · Sat



Which country has the strongest navy among China, Russia, Japan, South Korea, and North Korea (excluding submarines)?

Let's go over this: the North Koreans have massive amounts of old, rusting submarines, so they are out. The Russians have mostly old, obsolete ships from the Cold War era. China has a decent amount of new ships, and they are made in [\(more\)](#)

 Upvote · 2K



 113

 6





Thierry Etienne Joseph Rotty · [Follow](#)

Senior Controller at NATO · 17h



What is the point of having hundreds or thousands of nukes when it takes ten well-placed nukes or less to cause most nation states to collapse/the world economy to go down in flames?



weapons. They slam through the roof but destroy the heavy equipment inside (more)



Upvote · 77



7



David Tussey · Follow



Former Navy pilot (A-7E) · Dec 27

### How close could a foreign aircraft or ship get to a US aircraft carrier before it is intercepted and turned away?

Well they're not turned away, for one thing. There's no god given right for the US Navy to enforce a no-fly zone around an aircraft carrier. Aircraft nearing a US aircraft carrier will typically be escorted, and cautioned regarding air operations, but tl (more)



Upvote · 1.4K



47



8



Aya Shawn · Follow



Living in Singapore, professional investor · Sun

### Why does China not invade Russia to take their land back with 87% of the Russian military destroyed in Ukraine?

I understand the mentality of Ukrainian supporters: 1. Claim that Russia is about to be defeated, their army is about to collapse, and Putin is about to be overthrown. 2. Claim that China will be thinking about Siberia and that they will occupy Russi (more)



Upvote · 263



41



3



Promoted by Hostinger.com



Darius Grigorjevas · Follow

Head of Customer Success at Hostinger.com · Updated 3y



A domain name is like your physical address. It helps people find you out there on the World Wide Web. Coming up with a memorable and catchy domain name can become quite a challenge especially as your domain name may become your ! [\(more\)](#)



Upvote · 98



6

6



Questions for you



**Why does the Holey Bible claim God made humans from the dust of the Earth when humans are about 70% water with a pH close to sea water?** ×

13 answers · Last followed Dec 11



Answer



Follow · 1



Pass



**If 100% of the sun is 'on fire' (nuclear fusion), why has all the hydrogen fuel not already been consumed?** ×

15 answers · Last followed Sat



Answer



Follow · 3



Pass

**Scott Krager** · [Follow](#)

Lives in Portland, OR · 17h

**When installing a car battery, which terminal do you connect first?**

So, you're like me and decided to take the DIY route with your car. Commendable! Replacing a car battery is one of the more straightforward tasks, but it does require following some specific guidelines to do it safely. Here's the deal. You always [v \(more\)](#)



Upvote · 64



5

**Ranma Tardis** · [Follow](#)

Former Payroll Liasion Officer at U.S. Army Corps of Engineers (1989–2021) · Aug 24

You tell them! The USA Navy is the best in the world!



Jacques Malan · 2y

**How can US Navy carriers that were built 3-4 decades ago be better than Chinese Navy carriers built just 2-3 years ago?**

Love this question and I'll throw my hat into the ring here. The question, for the benefit of the uninformed, is the following: Why is this ship that was commissioned in 1975 better than this ship, commissioned in 2019? Someti [\(more\)](#)



Upvote · 1.2K

99

8



**Weird Science** · [Follow](#)



Answered by Silk Road · Nov 21

**How is the Three Gorge Dam made in China slowing down the speed of the Earth's rotation? What are the side effects?**

The largest dam in the world, this thing can hold up to 42 billion tons of water in its reservoir. Now, you might think that water is just water, and it doesn't matter where it is. But you'd be wrong. Water has mass, and mass has gravity. And gravity af [\(more\)](#)



Upvote · 3.9K

8

65



**Karma Shopping LTD**



Sponsored

**Karma: Your Key to Hacking Amazon Prices.**

Don't overpay on Amazon again! This Amazon shopping hack is like Prime Day on steroids.





Upvote · 25

