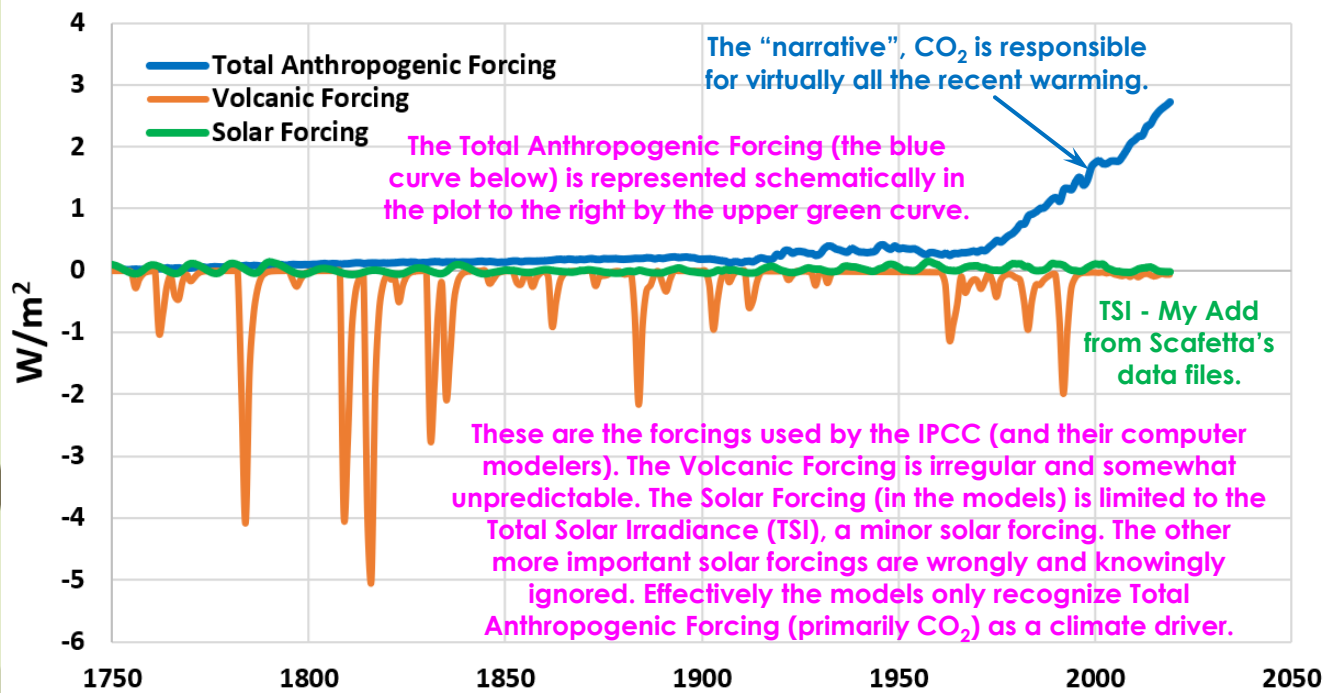


GSM - Grand Solar Minimum. The real "Climate Change" existential threat is right around the corner. Do the Research!

Modeling Over the Holocene - Forcings

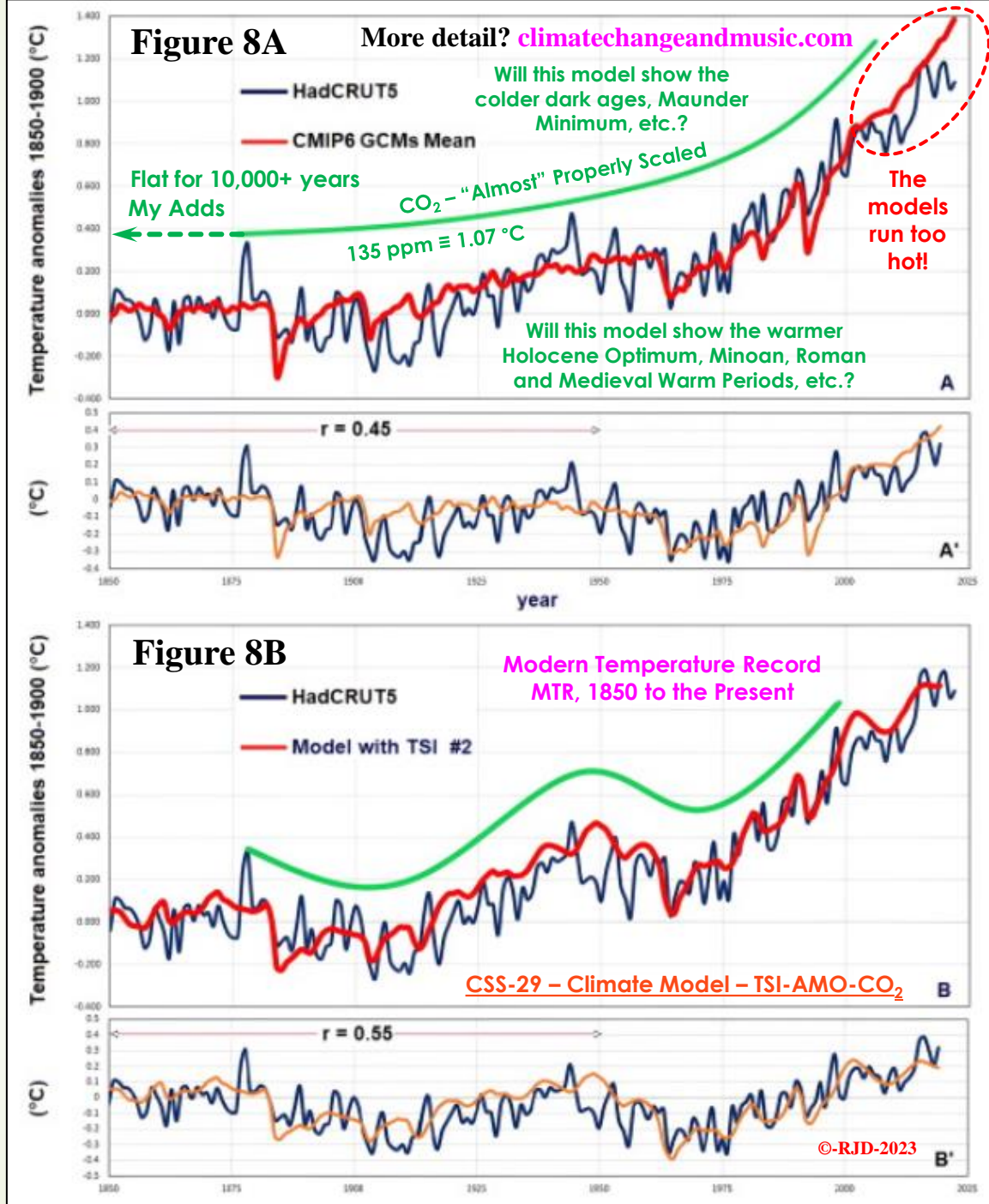


<https://www.sciencedirect.com/science/article/pii/S1674987123001172?via%3Dihub>

These two plots were pulled from Nicola Scafetta's June 2023 paper "[Empirical assessment of the role of the Sun in climate change using balanced multi-proxy solar records](#)". The plot above shows the general radiative forcings used by the IPCC. Their approach, ignore the natural forcings and attribute virtually all the warming to CO₂. And they wonder why their models (self-admittedly) run too hot (OPS-55 - The State of Climate Science). The plots to the right, show the model results.

Scafetta 2023 Model Forcing Comparison

The upper plot (Figure 8A), the IPCC narrative, shows that the MTR correlates reasonably well with rising CO₂ levels. The bottom plot (Figure 8B) shows the MTR/solar correlation (as per Scafetta, June 2023). Again, the green curve is a schematic representation. The end result, whether the alarmists like it or not, the solar forcing provides a better correlation than an Anthropogenic (i.e.: CO₂) focus. So, which approach is correct? Technically neither. There are many other forcings that also play a role. For example, the many ocean cycles (Atlantic Multi-decadal Oscillation (AMO), Pacific Decadal Oscillation (PDO), and the El Niño Southern Oscillation (ENSO) to start with) also play major roles in global temperature. Scafetta does show that the recent temperature rise could be explained with just solar forcings (those same forcings the IPCC chooses to ignore). Does adding 1 molecule of CO₂ per 10,000 molecules (0.01%) to our atmosphere have more warming capacity than all the many influences that are directly related to our sun's activity (Cosmic Ray Flux, Cloud Albedo, Solar Wind and/or Electromagnetic Field Strength, ocean cycles, etc.)? Let us explore that.



GSM - Grand Solar Minimum. The real "Climate Change" existential threat is right around the corner. Do the Research!

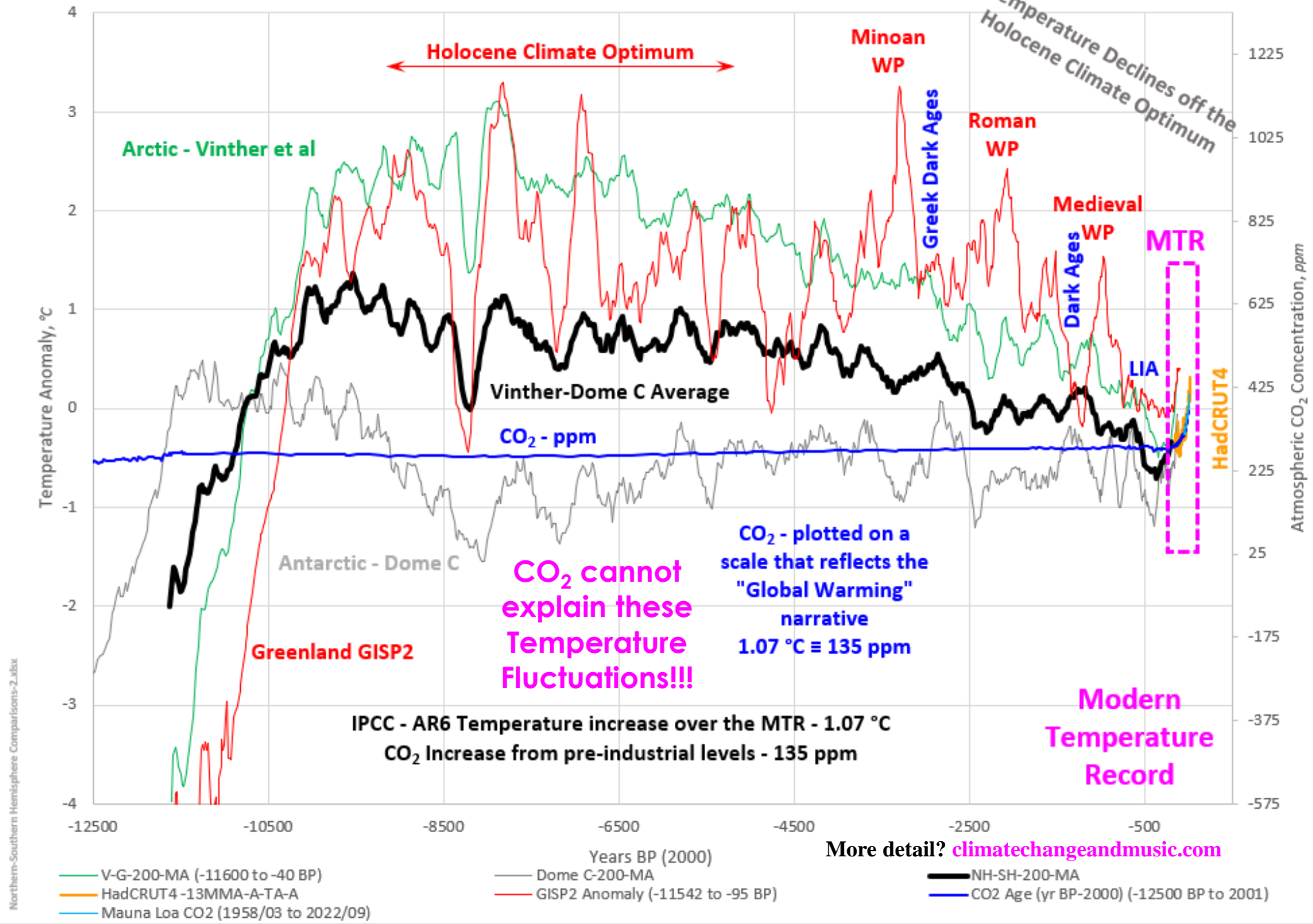
Modeling Over the Holocene Temperature/CO₂ Correlation

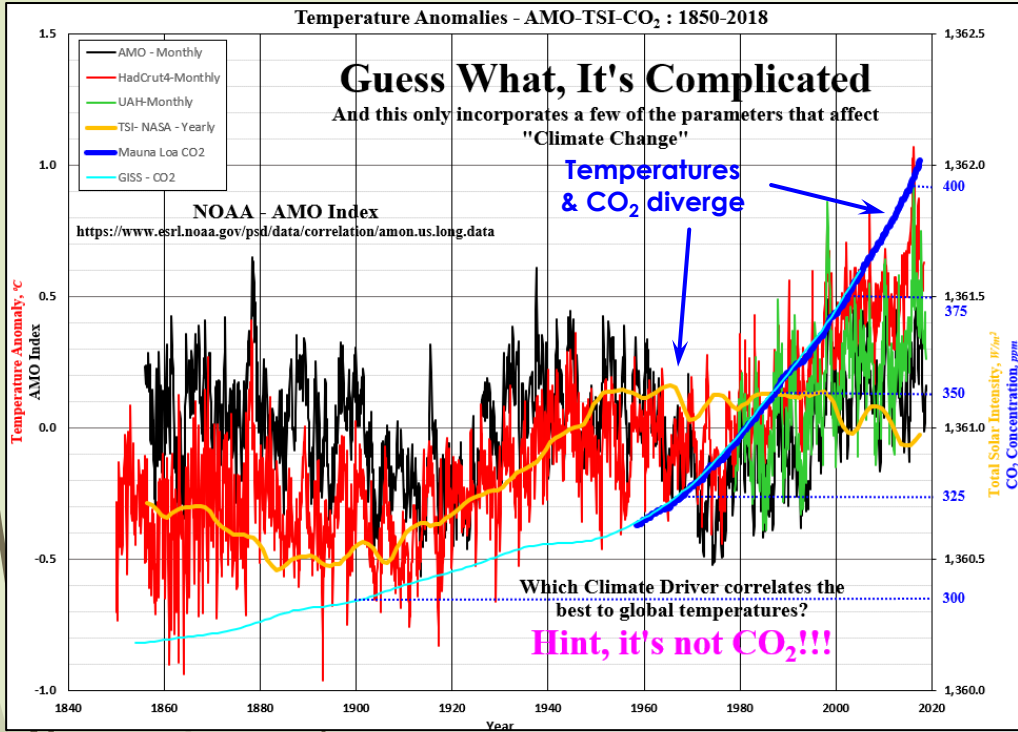
If you believe that CO₂ has been responsible for the 1.07 °C warming since the pre-industrial era, then you need to plot the data on scales that represent that narrative. What happens when we expand the time scale out to include the rest of the Holocene Interglacial Warm Period? The temperature/CO₂ are still correlated over the MTR. But that correlation disappears dramatically pre-MTR. Somehow, the temperatures still manage to fluctuate significantly despite a virtually flat CO₂ concentration for over 10,000 years. Do you honestly believe that the IPCC models could replicate the pre-MTR Holocene global temperatures. Do you really believe that the natural forcings (primarily solar (directly and indirectly)) present throughout the Holocene suddenly stopped acting on our planet during the MTR and will not be active in the future? Obviously, the alarmist CO₂ narrative is simplistic, unscientific, and does not represent reality. Ignoring those natural forcings has led, is leading, and will continue to lead us down a path to economic suicide.

Holocene Temperature/CO₂ Correlation

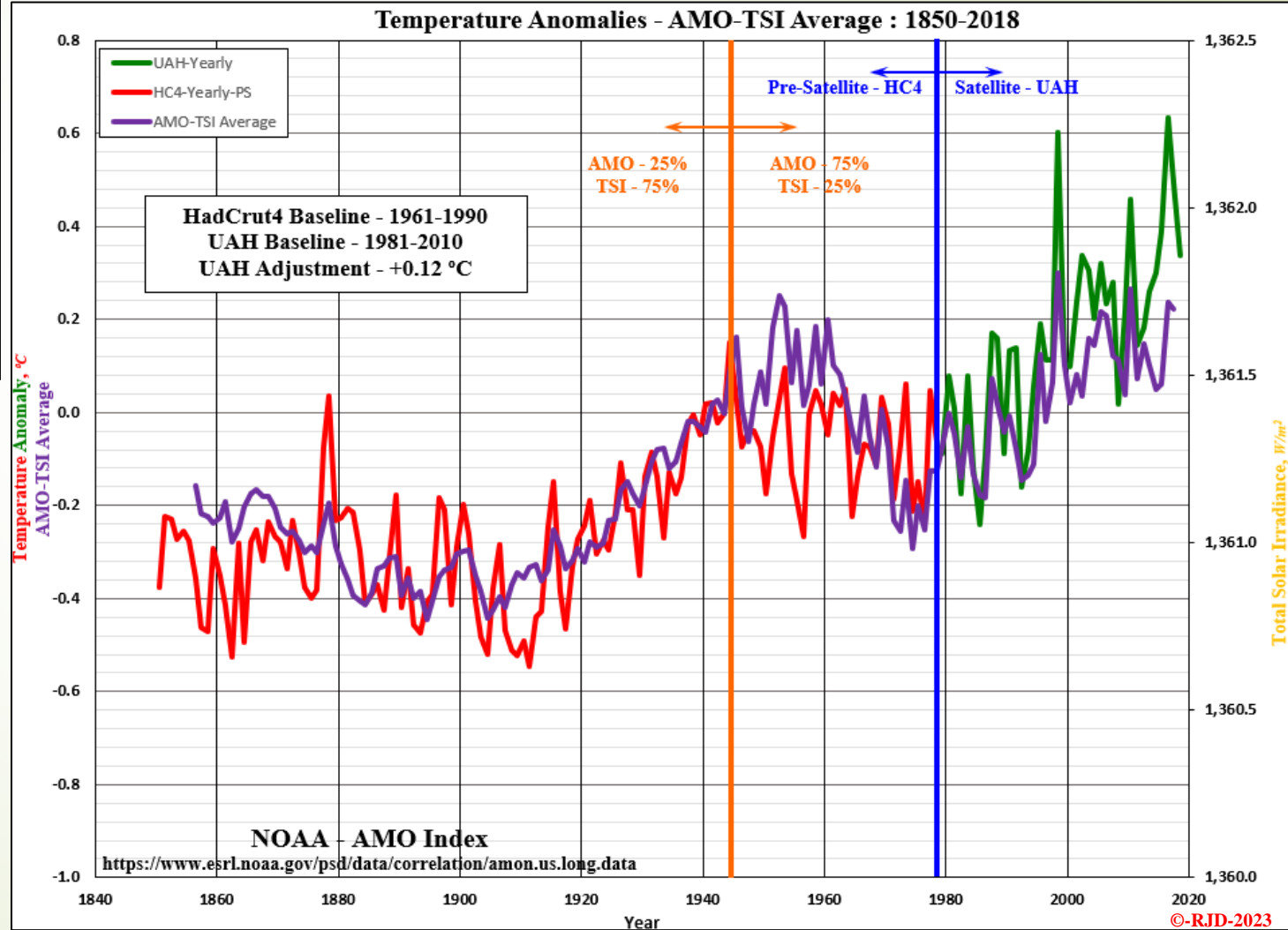
Do you really believe that the natural forcings (primarily solar (directly and indirectly)) present throughout the Holocene suddenly stopped acting on our planet during the MTR and will not be active in the future? Obviously, the alarmist CO₂ narrative is simplistic, unscientific, and does not represent reality. Ignoring those natural forcings has led, is leading, and will continue to lead us down a path to economic suicide.

Global Holocene Temperature-CO₂ Correlations





These two plots come from my 2019 [OPS-8 – Basic Climate Model](#) and [Open Letter Addendum](#) posts. Climate Science is obviously complicated and cannot be scientifically reduced to a very small change in atmospheric CO₂ changes. And certainly not human emissions, since over 86% of our emissions occurred post-1950. The temperatures over the MTR (like the pre-MTR Holocene) fluctuate significantly and independently of rising CO₂ concentrations. That does not mean CO₂ is not contributing. But that does beg the question, how much of the warming is CO₂ related and/or our fault? I put together a very simple model using just the Total Solar Irradiance Momentum (TSI_M) (the



20 Year Moving Average), as a proxy) and the Atlantic Multi-decadal Oscillation (AMO) that provides a much better correlation than CO₂

on its own. This model is very simplistic and obviously does not factor in all the possible forcings. But neither do the IPCC models (which you might want to remember, run too hot (according to the modelers)). I, like Scafetta, can

reasonably model the MTR with no CO₂ contribution. In a more recent spreadsheet (next slide), I have added in a CO₂ contribution and lengthened the time frame to cover the Central England Temperature (CET). At some time in the future, I will update my models with the Scafetta TSI reconstructions to see how they compare. When all the data is considered, you need to ask why temperatures declined from 1945 to 1975, how much of the temperature rise from 1975 to 2005 is due to the AMO, and why have temperatures deviated from the rising CO₂ curve post 2005? There is a lot more going on than just CO₂. The sun/oceans?

It's Complicated Simple Model

GSM – Grand Solar Minimum. The real “Climate Change” existential threat is right around the corner. Do the Research!

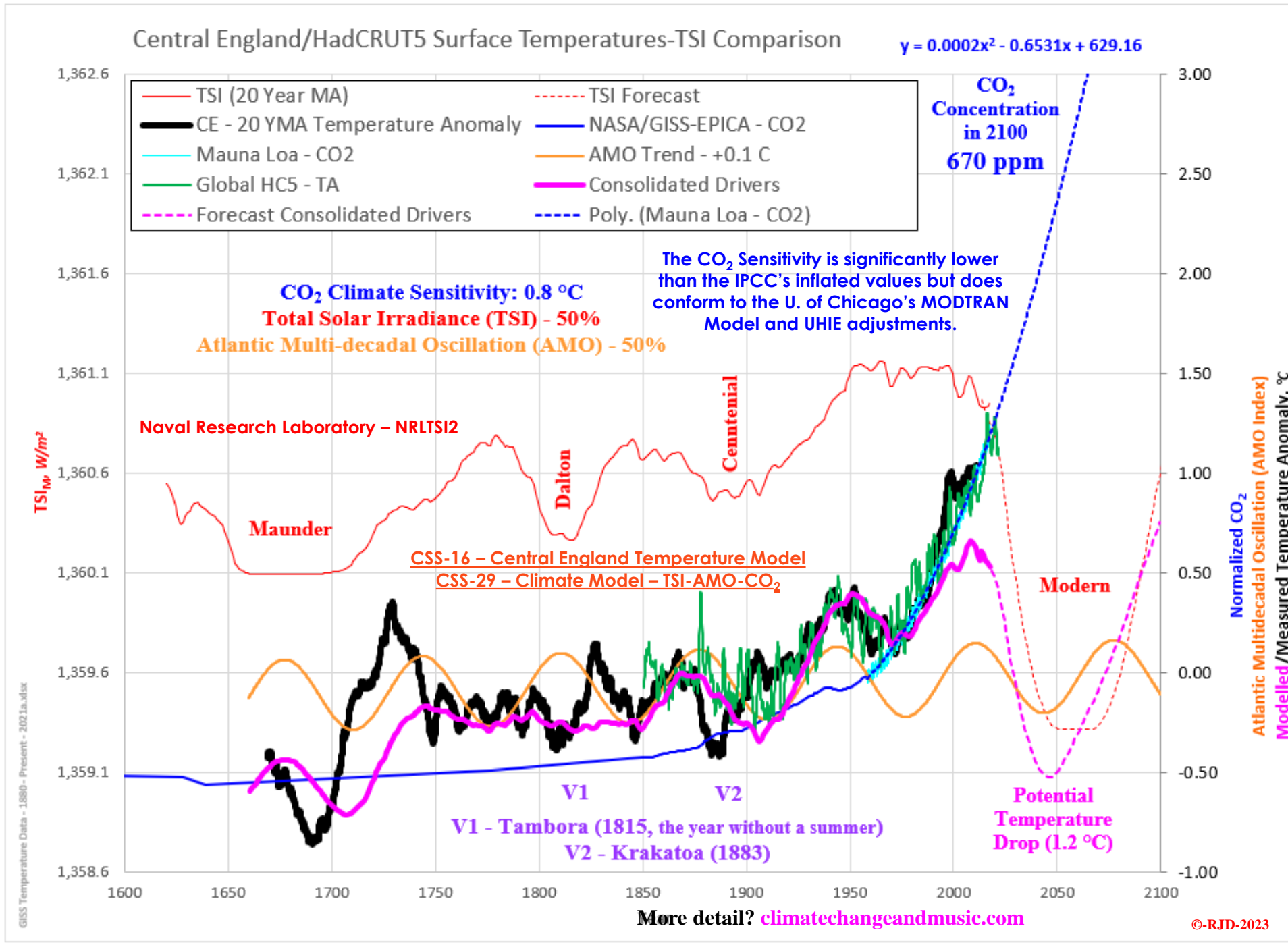
Modeling Over the Holocene – Central England Temperature (CET) Model

The CET is obviously localized but does in general move parallel to the HadCRUT5 global surface temperatures. As mentioned on the previous slide, I have added in a CO₂ contribution (using a 0.8 °C climate sensitivity) and I have assumed the TSI and AMO have similar weightings throughout the history. As with the previous model, my fit (although simplistic) is still more representative than the alarmist's simplistic, unscientific CO₂ focused alternative. Adding

CET Model History Match & Projection

in PDO and ENSO would likely tighten up the correlation.

But that data does not go as far back and does not have a smooth sinusoidal profile like the AMO to project back into the past or the future. Both the TSI and the AMO are projected to drop over the next few decades. Those potentially dangerous temperature drops are being ignored by the alarmist community and their models.



GSM - Grand Solar Minimum. The real "Climate Change" existential threat is right around the corner. Do the Research!

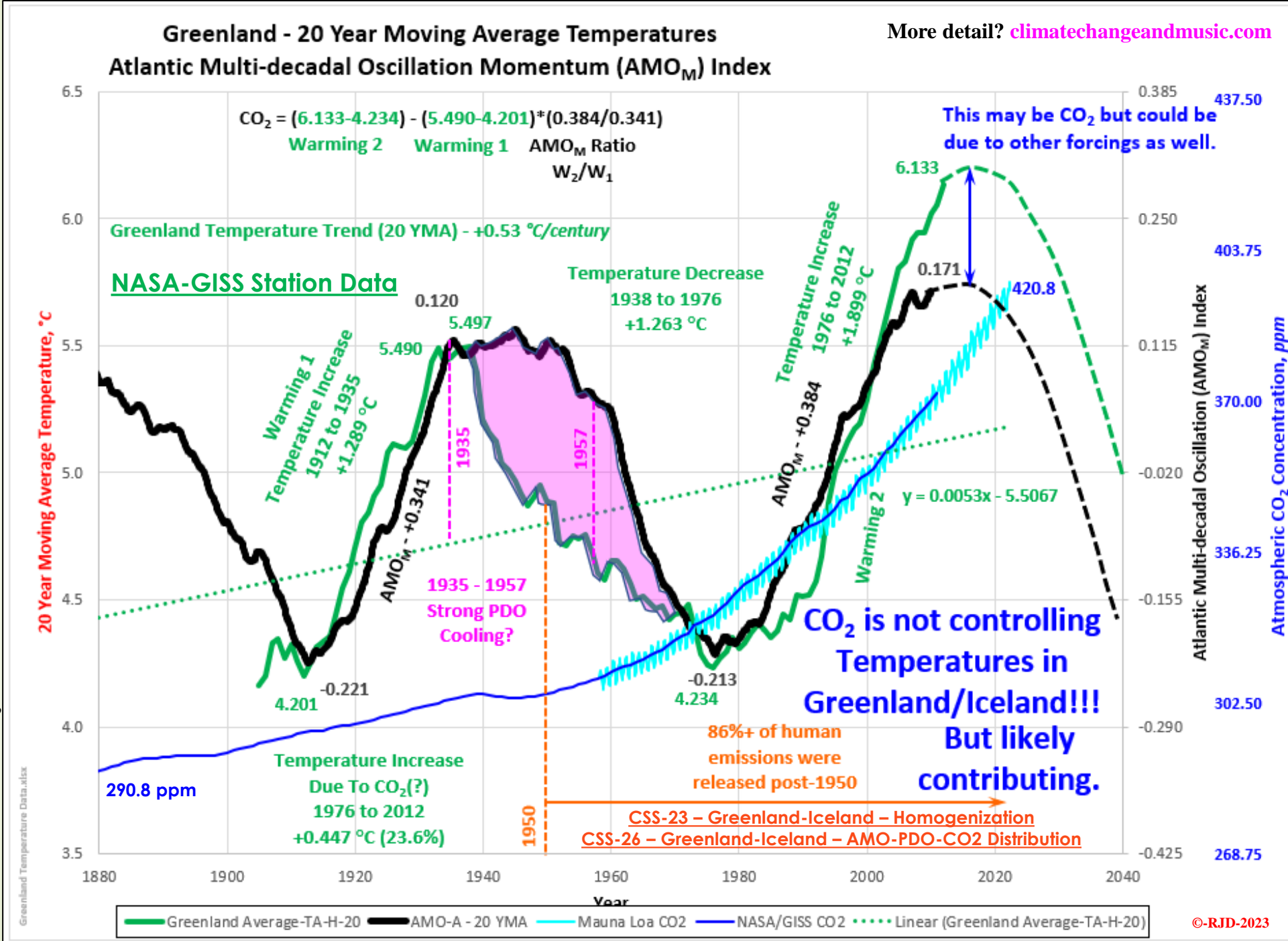
Modeling Over the Holocene - Greenland Temperatures

Greenland (and Iceland) temperatures (while localized) provide a very important perspective on radiative forcings. The plot shows the average Greenland temperatures plotted against the Atlantic Multi-decadal Oscillation (AMO) and CO₂. This is just my opinion, but I would have to say that the AMO has more influence on Greenland than CO₂. Is that important globally? I would think yes. The IPCC "forecasted" significant sea level rise (at least over the next century) would

most likely come from Greenland. Temperatures in Antarctica are very cold (-57 °C),

Greenland Temperature AMO/CO₂

with a slightly positive temperature trend (+0.13 °C/century). So, for the record, neither Antarctica nor Greenland are melting anytime soon (OPS-65 - CO₂-Temperature Extrapolations). And as seen in the tide gauge data, sea level rise has not been accelerating and is not likely to accelerate much (if any) in the future.



More detail? climatechangeandmusic.com