

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

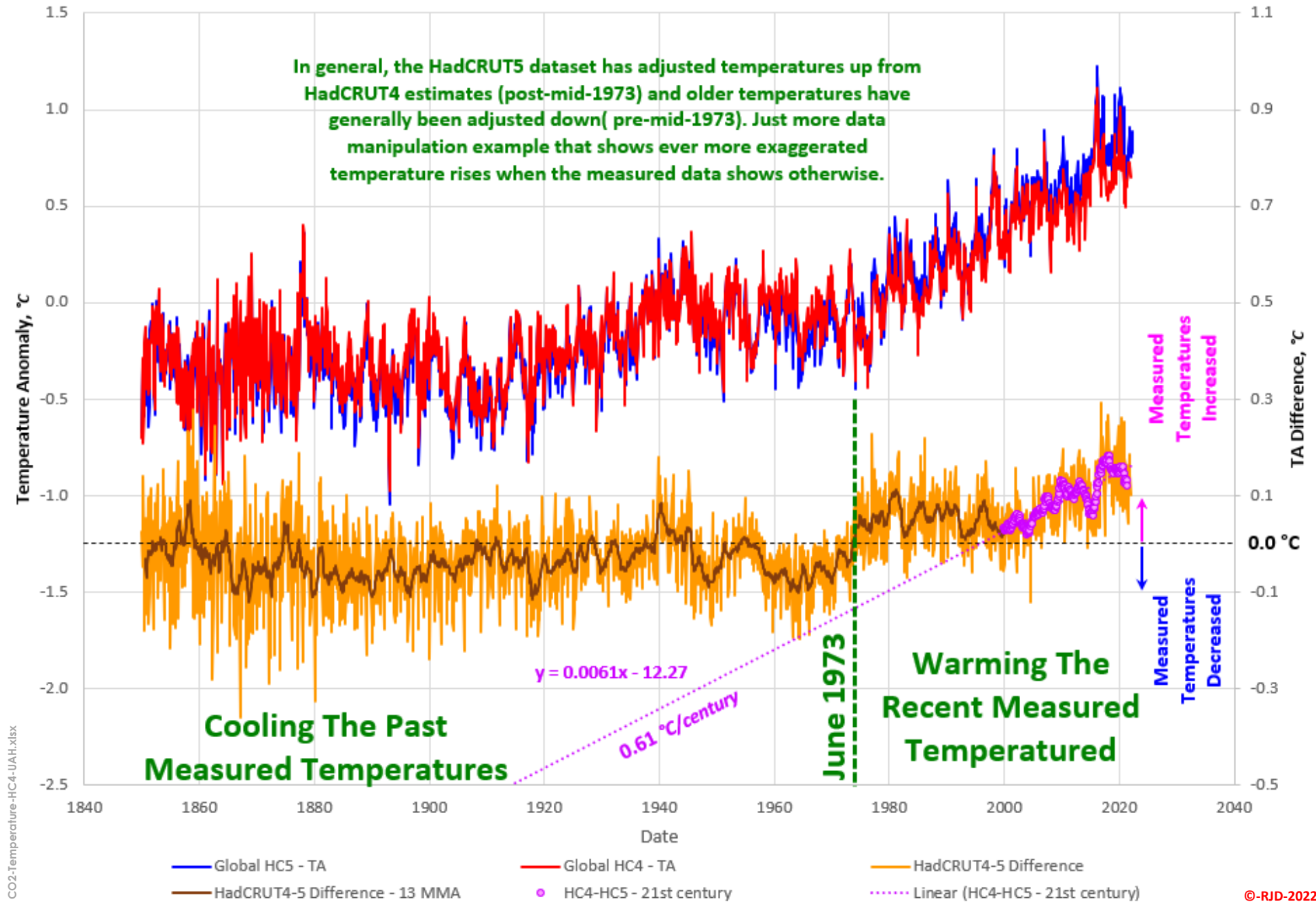
Incremental Homogenization HadCRUT4 to HadCRUT5

Data Manipulation is just a standard process in the world of "climate science". Strange how every manipulation seems to always favour the Catastrophic Anthropogenic Global Warming (CAGW) alarmist narrative. This CSS looks at just the incremental homogenization that the Hadley Center applied going from their HadCRUT4 to HadCRUT5 Temperature Anomaly profiles. As an aside, there was no attempt to resurrect the much warmer measured temperatures of the

late 1800s or the Dirty Thirties. Not unexpectedly, temperatures

HadCRUT4 To HadCRUT5

in the past have been reduced on average by 0.037 °C (pre-June 1973). More recent temperatures have been adjusted up on average by 0.070 °C. The incremental homogenization is getting more aggressive every year now (increasing at 0.61 °C/century since the turn of the century). Must keep that narrative going!



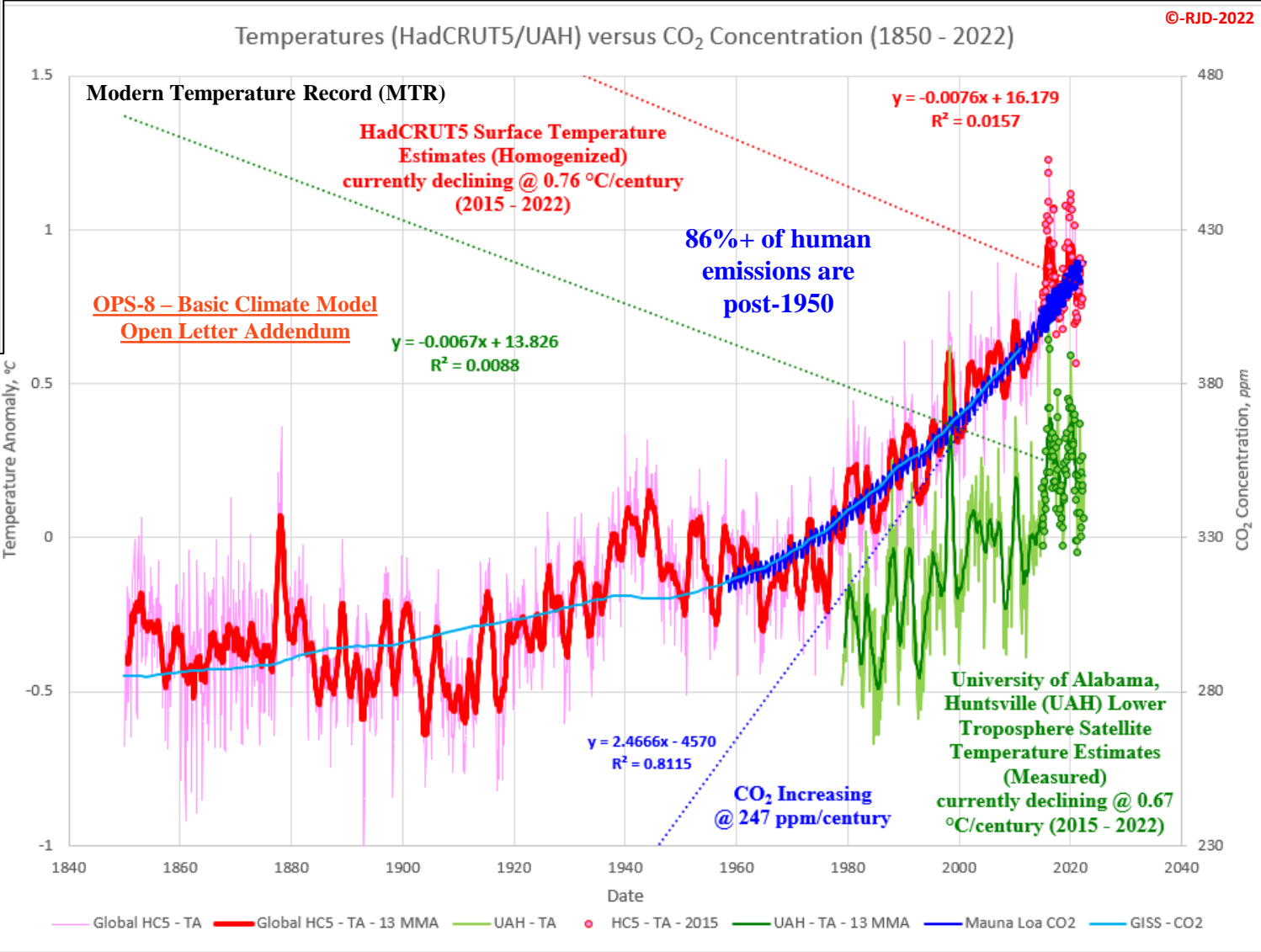
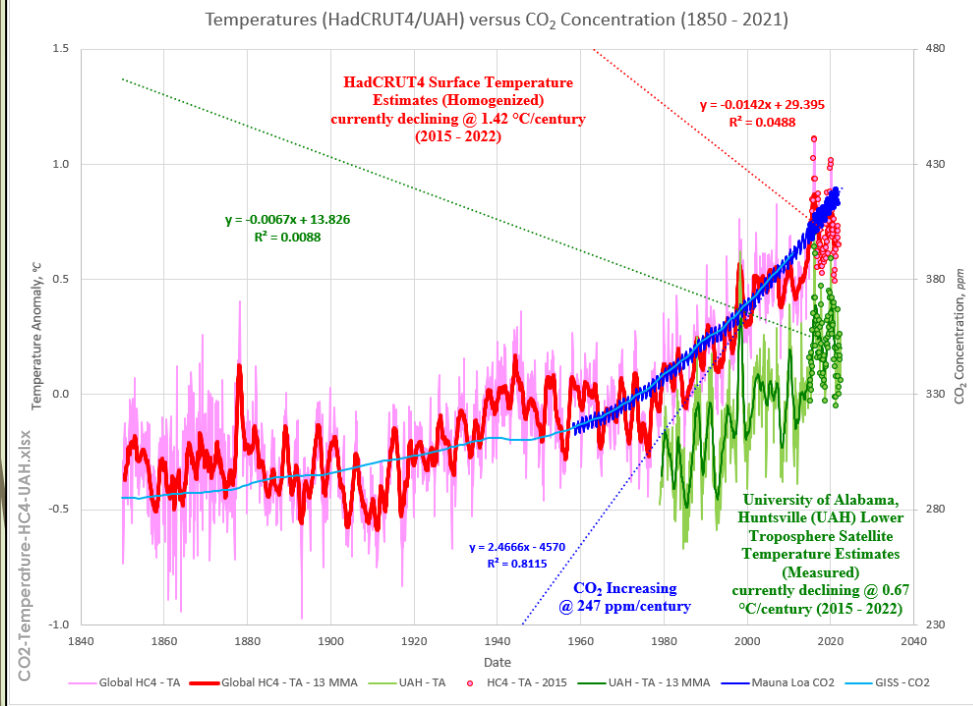
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More Detail: climatechangeandmusic.com

CSS-25b

Incremental Homogenization HadCRUT4 to HadCRUT5 – UAH - MTR

This slide adds in the CO₂ concentration and the UAH Lower Troposphere Satellite Temperature data. The smaller slide to the left is the HadCRUT4 temperature anomaly data. The larger plot below is the HadCRUT5 temperature data. The CO₂ data has been correlated with the CAGW alarmist narrative (CO₂ is the dominant climate driver). That correlation does not hold prior to 1850 and will not hold in the future.



The CO₂/Temperature correlation is a topic unto itself and will not be discussed here. Needless to say, but there is no empirical CO₂/Temperature dataset that shows CO₂ driving the climate on any statistically significant historical time scale. Yes, I said it. Global temperatures have been declining since late 2015.

HadCRUT4-5 UAH - MTR

The HadCRUT4 data was declining at a 1.42 °C/century pace. Through the magic of “homogenization” HadCRUT5 has reduced that temperature decline to 0.76 °C/century. The UAH temperature decline is a more modest 0.54 °C/century. The Lower Troposphere temperature anomaly peaked in February 2016 at 0.70 °C and is currently 0.06 °C (June 2022). A drop of 0.64 C over 7+ years. That does not fit very well with the CAGW alarmist narrative. Overall temperatures have increased over this time period (from the depths of the Little Ice Age (LIA)). But even in the highly homogenized data, you can still see the solar activity influence (pre-1950 with minor cooling contribution in the UAH data) and the ocean cycle influence (Atlantic Multi-decadal Oscillation (AMO) throughout and El Niño Southern Oscillation (ENSO) more recently. CO₂ contribution is not required to model these temperatures.

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Incremental Homogenization HadCRUT4 to HadCRUT5 Satellite Era

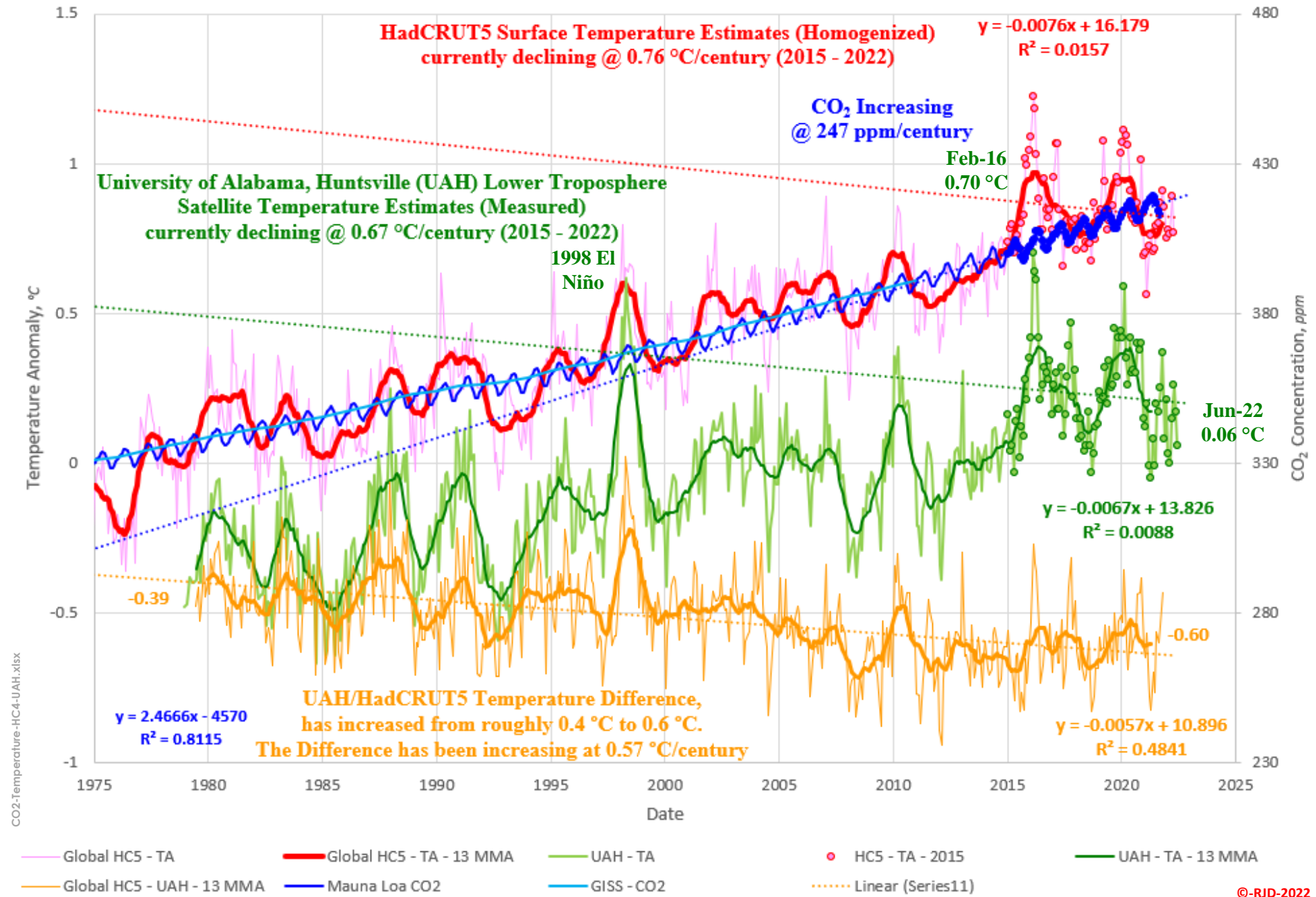
This slide focuses on the satellite era, comparing the new HadCRUT5 Surface Temperature Anomalies to the UAH Lower Troposphere (LT) Satellite Temperature Anomalies. When the first satellite measurements became available, the UAH LT Satellite data was roughly 0.4 C lower than the HadCRUT5 Surface data. That difference has increased to current levels of roughly 0.6 C. The difference is increasing at a rate of 0.57 C/century. These two data sets can have different values, but the increasing difference is suspicious. The

difference would not have anything to do with homogenization, would it? As per

HadCRUT4-5 Satellite Era

CSS-25a (the first slide), the incremental homogenization transitioning from HadCRUT4 to HadCRUT5 maxed out at 0.6 C/century (over the 2000 to 2022 period). That does not include the homogenization being conducted at the individual station level (where they homogenized away the Dirty Thirties and the 1998 Super El Niño).

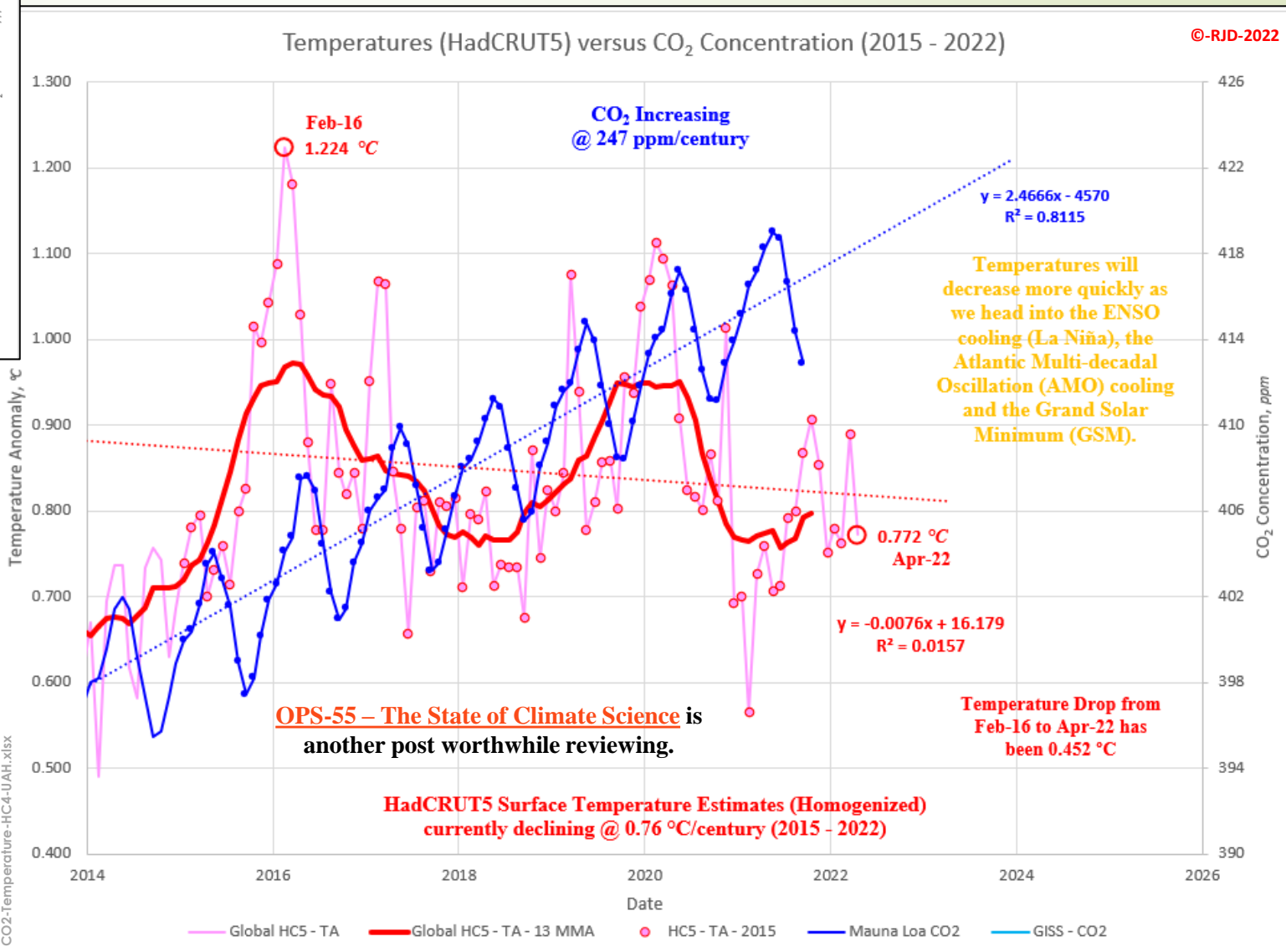
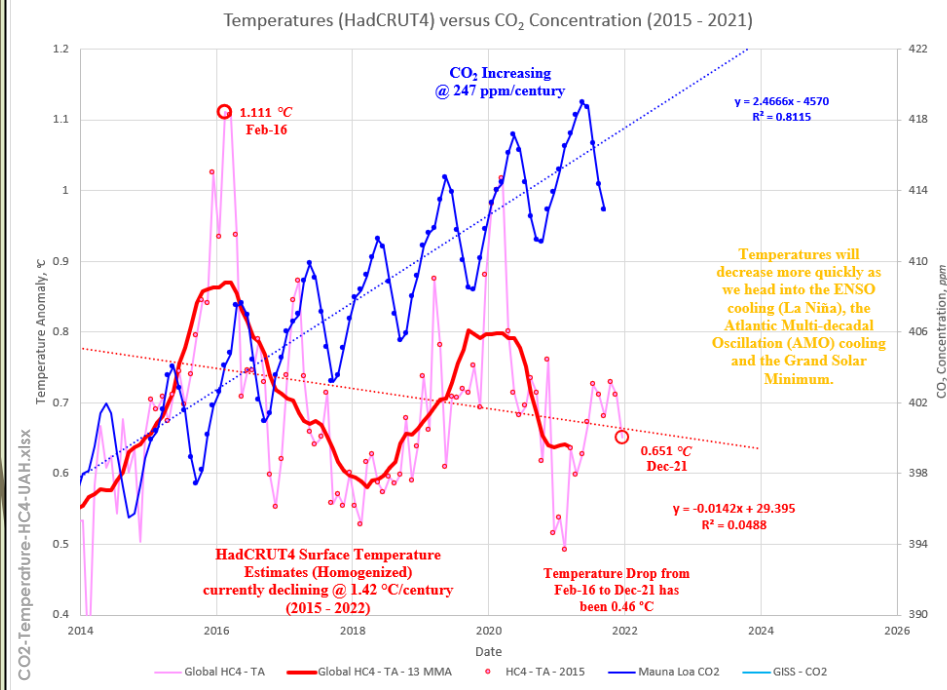
Temperatures (HadCRUT5/UAH) versus CO₂ Concentration (1975 - 2022)



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Incremental Homogenization HadCRUT4 to HadCRUT5 – Recent Data

This slide focuses on the more recent data (2015 – 2022). The dominant driver over this period is not CO₂. An aggressive El Niño started in 2015 and peaked in 2016 (beating out the 1998 El Niño high by 0.02 °C as the hottest temperature EVER recorded). A few weaker El Niños and some La Niñas have followed. The 2020 El Niño was followed by a strong, extended La Niña. The AMO has been relatively benign recently but is headed into its cold



phase. Solar Activity has been on a shallow decline since the turn of the century (most likely contributing to the “PAUSE” from roughly 1998 to 2015 and the 2015 to 2022 decline shown here). Solar Activity will decline further over the next couple of decades as we move further into the Grand Solar Minimum (GSM) we are

Just starting to experience. Temperatures will follow that Solar Activity down (as it has for every Grand Solar Minimum throughout history). Some back-up information/links can be found in my [OPS-52 – Solar Activity –](#)

NOAA Forecast and [OPS-56 – The “PAUSE”](#) posts. To summarize, when all the data is reviewed, the CAGW alarmist narrative can only survive with the help of “homogenization”. And that “homogenization” out of necessity, is getting more aggressive every year. As mentioned earlier (CSS-25b), the temperature over the Modern Temperature Record (MTR, 1850 to the present) can be described without any CO₂ contribution. For the record, CO₂ increases do contribute to temperature rise, just not at the levels the CAGW alarmists have arbitrarily assigned (refer to [CSS-7 – CO₂ – The FECKLESS GreenHouse Gas](#)). **There is no Climate Emergency!**

HadCRUT4-5 Recent Data

[OPS-55 – The State of Climate Science](#) is another post worthwhile reviewing.