

The Solar Cycle Explanation for Climate Change

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Commentary

Received: 01-Feb-2023,
Manuscript No. JEAES-23-88401
Editor assigned: 03-Feb-2023,
PreQC No. JEAES-23-88401 (PQ);
Reviewed: 17-Feb-2023, QC No.
JEAES-23-88401; **Revised:** 24-
Feb-2023, Manuscript No. JEAES-
23-88401(R); **Published:** 3-Mar-
2023, DOI:10.4172/ 2347-
7830.2023.11.002
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Citation: Erwin D. The Solar Cycle
Explanation for Climate Change.
RRJ Ecol Environ Sci 2023;11
:002
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ABOUT THE STUDY

The reality of Climate change has been debated between two groups in recent decades. The manmade climate change believers have given the second group the name Deniers. The Manmade group believes increasing Earth temperatures since 1850 are due to the burning of hydrocarbons with the destructive accumulation of carbon dioxide and methane in the upper atmosphere. The Deniers are a group having the audacity to challenge the Manmade group's contentions with the belief that an increase of only 1.12°C during the last 172 years is not very significant.

Recently a Solar Cycle group has emerged with the scientific explanation that increasing Earth temperatures are due to the natural temperature cycles of the Sun. When proven solar cycles of 1,000,70, and 12 years are applied to the last five historical temperature epochs on earth and the measured earth temperatures since 1850 The Cyclical Sine Model explanation for climate change emerges as the Solar Cycle model [1-4]. Earth temperatures were not measured prior to 1850 but scientific studies from glaciologist's, ice cores, spelunker's, stalagmite's, oceanographer's, coral reefs, and paleontologist's, fossilized pollen have shown indirect evidence of significant earth temperature cycles.

Keywords: Climate change; Solar cycle; Cyclical sine model; Earth

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All have discerned low and high earth temperature cycles occurring about every 1500 ± 500 years [5]. The Solar Cycle model with the green points being the historical midpoint dates for the past historical temperature epochs such as the Medieval Warming. The red points are measured Earth temperatures since 1850. The Solar Cycle model found a primary solar temperature cycle of 1,071 years coupled with a second of 73 years to quantitatively fit the data. These two cycles are additive with secondary upswings and down-dips in temperature about every 35 years until the next maximum Earth temperature in 2232. The working assumption of the Solar Cycle model is that the Earth has experienced these hot and cold cycles in the past and will in the future reaching about the same highs and lows. The figure to the right below shows that the measured earth temperatures themselves contain a 73 year temperature cycle nearly identical to the known solar cycle of about 70 years (Figures 1 and 2).

Figure 1: The solar cycle model.

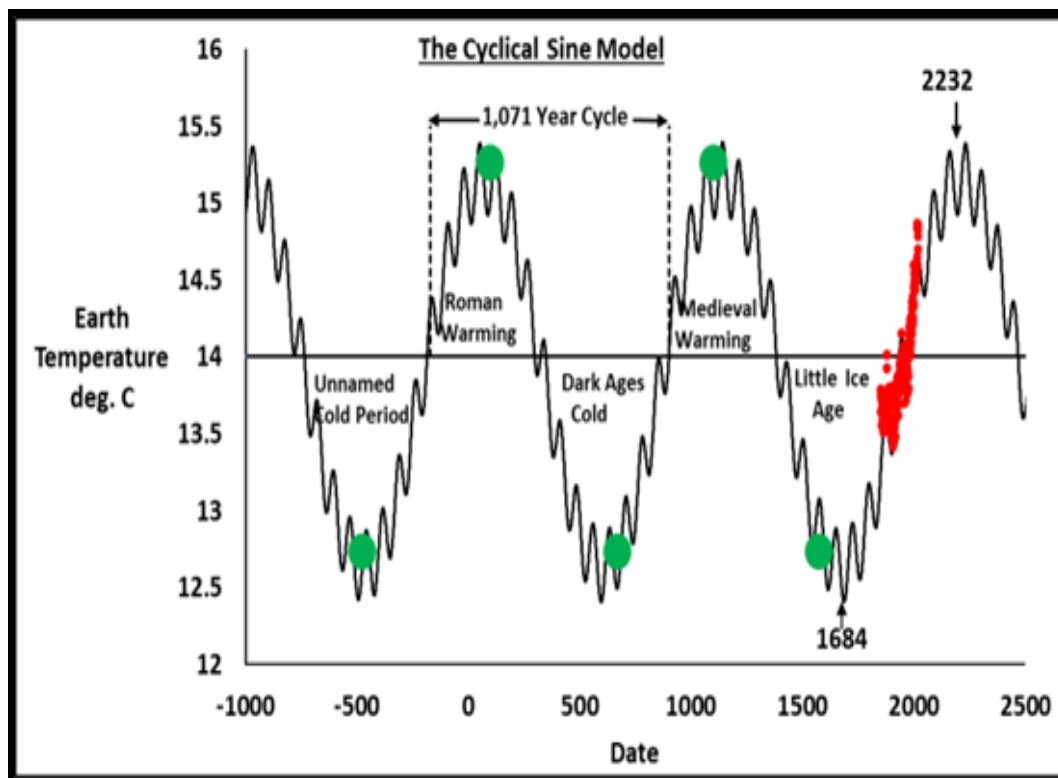
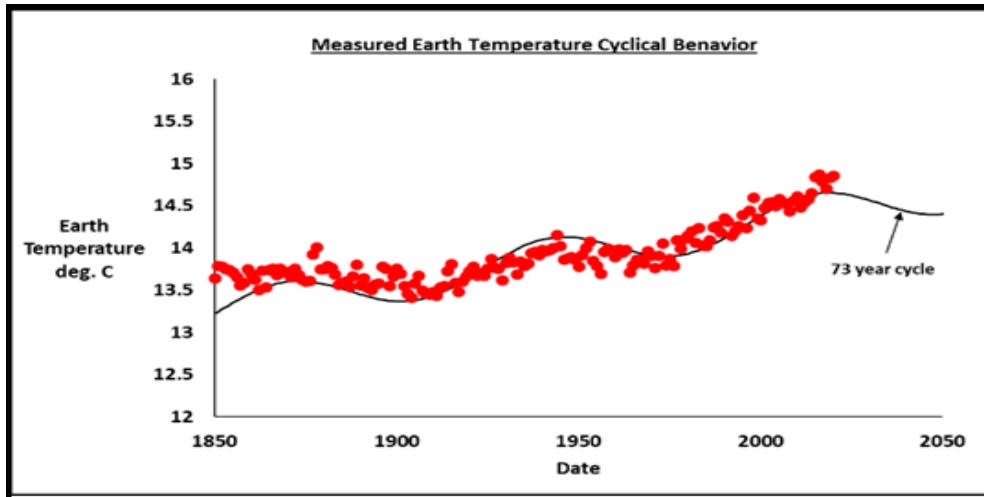
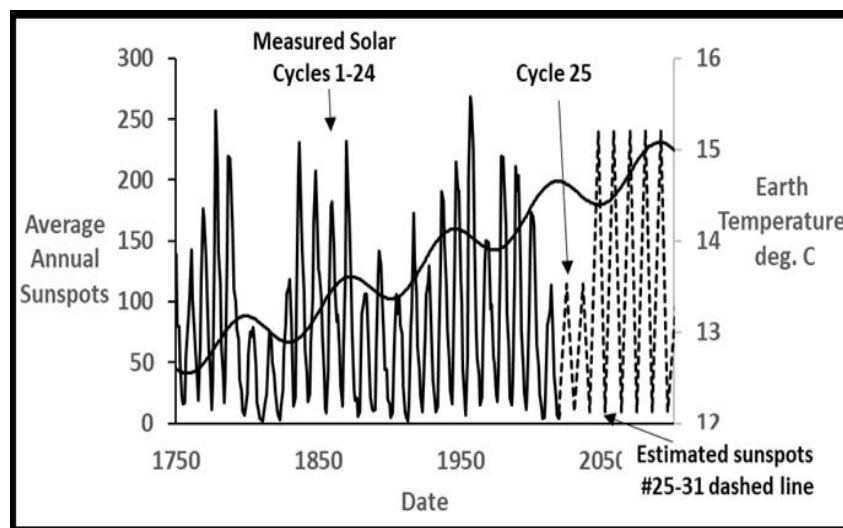


Figure 2: Measured earth temperatures.



It is very significant that the 73 year secondary cycle found in the Solar Cycle model correlates very closely with sunspot measurements taken since 1750. Sunspot numbers cycle about every 12 years with large numbers of spots termed maxima and small numbers termed minima (Figure 3).

Figure 3: Sun spots estimated in solar cycle model.



The figure shows that secondary upswings in the Solar Cycle model correlate closely with sunspot maxima while minima correlate closely with down-dips. These correlations affirm the known thermodynamic facts that maxima correspond to increased solar irradiation while minima involve reduced irradiation [6]. Predictions for future sunspot cycles 25-31 are shown as dashed lines with cycles 25 and 26 predicted to be minima and 27-31 maxima. The accuracy of these predictions will either validate or disprove the Solar Cycle model.

A more imminent test of the Solar Cycle model is shown in the figure below with comparison to the United Nations Intergovernmental Panel on Climate Change most recent Manmade Climate Change model [7] (Figure 4).

Figure 4: Graphical representation of comparison of Earth temperatures between Cyclical Sine Model and UNIPCC Model 5 (United Nations Intergovernmental Panel on Climate Change).

CONCLUSION

The predictions for the next several decades are very different. The 2021 and 2022 Earth temperatures show a downward trend tending to support the Solar Cycle model. Will 2023 and years beyond confirm that the earth is in a down-dip cycle as predicted by the Solar Cycle model where earth temperatures will level off for a while and later increase? The next several years of annual average earth temperatures will be crucial in determining which model is correct.

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