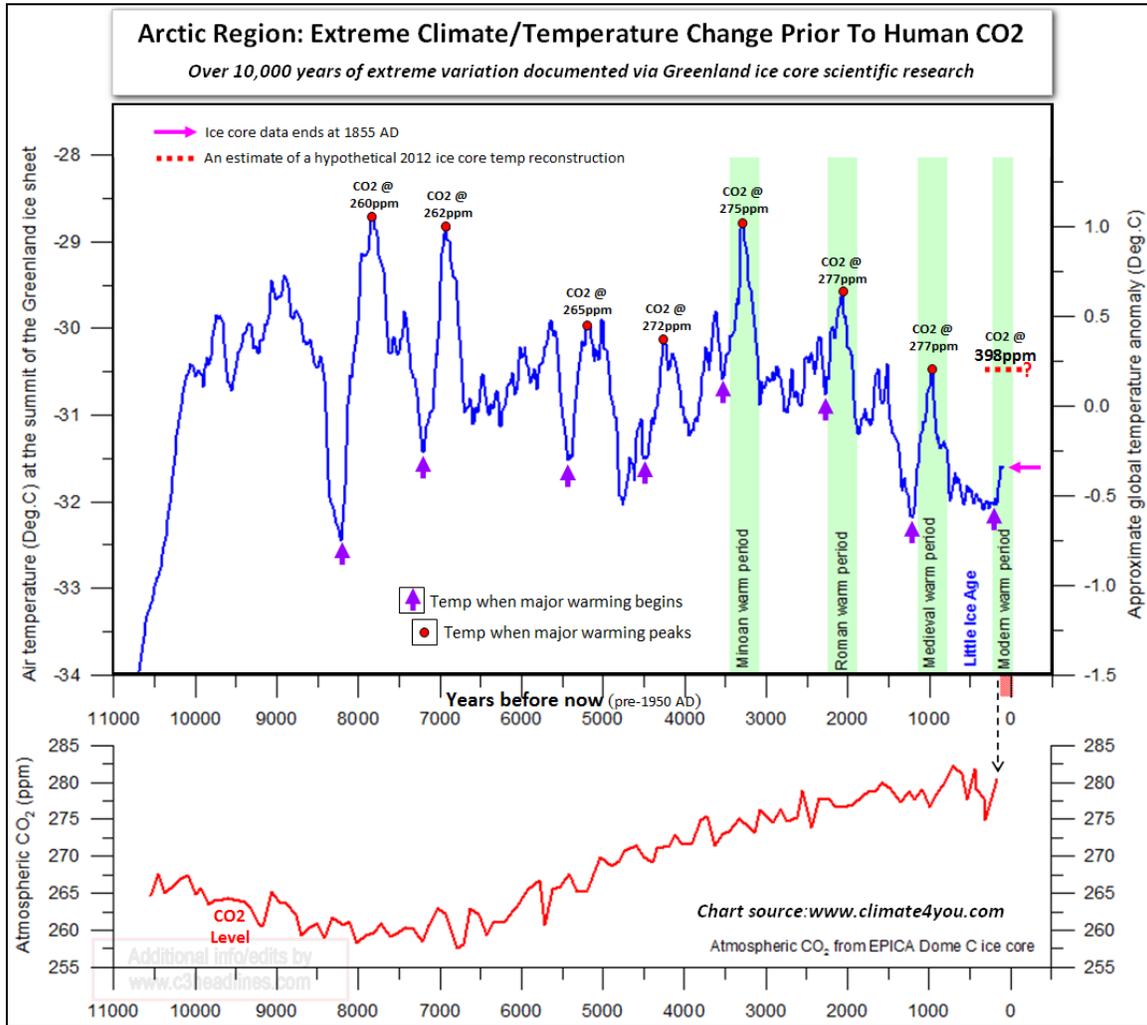


Natural Oscillations: The Dominant Factors Driving Weather/Climate Past, Current & Future



As the above charts depict, atmospheric CO₂ levels have little, if any, impact on short and long-term temperature variation and overall climate. If not human CO₂ emissions, then what causes the world's climate and weather to vary so drastically?

The answer, oscillations. Specifically, climate oscillations, cycles and patterns that are best described as large interactions between the atmosphere and oceans. These oscillations affect the world's climate on

a basis of global, regional and local levels. These cycles can recur on a short-term basis (i.e. several days) to millennial patterns stretching a thousand years or more.

These natural patterns can cause massive climate variability, impacting temperatures, the jet stream, ocean currents, cloud formation, storminess and precipitation. In fact, the oscillation impacts can be so severe that civilizations collapse as a result (e.g. the [Eastern Mediterranean](#) and [Mayan](#) civilizations).

From Wikipedia: "[Extreme phases](#) of short-term climate oscillations such as ENSO can result in characteristic patterns of floods and droughts (including mega-droughts), monsoonal disruption and extreme temperatures in the form of heat waves and cold waves."

From World Meteorological Organization: "[These fluctuations](#) or "oscillations" as they are often called (because they oscillate between two main states) can have a large affect on the climate, both locally and on a global scale."

From NASA: "[Over the past](#) thirty years researchers have recognized that many severe changes in our weather are due to massive, cyclical anomalies in air pressure and sea surface temperature across large tracts of ocean. Such fluctuations spawn the weather systems that cause huge floods, create droughts and even contribute to global warming. While the largest of these, El Niño, has received all the recent press, scientists have discovered other climate anomalies throughout the Earth's oceans. Their names are generally unoriginal—the North Atlantic Oscillation, the Atlantic Intertropical Convergence Zone (ITCZ) oscillation, the

warm pool oscillation and so on. But together with El Niño, they are responsible for well over fifty percent of climate variability on the Earth. If scientists ever get to the point where they understand all these climate cycles, they may be able to predict major weather patterns months in advance."

To reiterate, these are **natural** cyclical patterns that humans don't produce and/or cause. Also, humans can't manage/control these patterns. And for the most part, humans, with all their sophisticated super-computer capabilities, are unable to predict when these oscillations will actually occur, or if any future oscillation phase will be one that creates massive weather events and disastrous societal disruptions.

Potential origins and causes of oscillations: the solar system [barycenter](#) hypothesis; the [Hale cycle](#); the [astronomical harmonic](#) relationships; the Earth's [geophysical/volcanic/tectonic](#) activity (land/sub-sea surface); the [Milankovic](#) cycles; the [Daansgard-Oeschger Cycles](#); the [glacial/interglacial periodicity](#); the continuous [solar variation](#) cycles; the [cosmic ray flux](#) from distant supernovas; the cloud/ice albedo feedbacks (both positive and negative) and etc.

These, in combination with other yet undiscovered/undocumented causes, are likely to have a large impact on the multiple major/minor atmosphere-ocean oscillations.

Below is a partial list of either known, hypothesized and/or interrelated atmosphere-ocean cycles/patterns:

1. the [Madden-Julian Oscillation](#)
2. the [Atlantic Multidecadal Oscillation](#)
3. the [Scandinavia pattern](#)

4. the [El Niño Southern Oscillation](#)
5. the [Pacific Decadal Oscillation](#)
6. the [Interdecadal Pacific Oscillation](#)
7. the [Tropical/Northern Hemisphere pattern](#)
8. the [Arctic Oscillation](#)
9. the [North Atlantic Oscillation](#)
10. the [North Pacific Oscillation](#)
11. the [Pacific North American Oscillation](#)
12. the [Antarctic Oscillation](#)
13. the [Subtropical Indian Ocean Dipole](#)
14. the multiple [monsoon patterns](#)