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Midas or Gaia revisited, about anthropogenic tempering with the natural response system

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The controversy between the CO_2 driving or lagging models is elucidated in a new climate model, that reunites insights from models from other planets, carbon draw down models during earth history as a whole, spores spike related to catastrophic events from the Phanerozoic, late Palaeozoic climate models and carbon dioxide and temperature fluctuations during the Quaternary as shown by Petit et al., (1999).

This model advocates that for the natural system orbitally induced insolation maxima (eccentricity in particular) momentarily and erratically trigger ocean degassing and drive temperature rise orbitally while it is otherwise driven by carbon drawdown through photosynthesis leading to cooling.

For the natural system high concentrations of particulate organic carbon (fungal spore, pollen, vegetation debris, soot and charcoal) or abiotic dust are forming crystallisation cores that trigger an ephemeral greenhouse effect in the cirrus from the lowermost stratosphere. This happens at the onset of orbital insolation peaks when warming leads to larger crystal sizes. The consecutive warming induces the waxing of the cirrus forming sphere which necessarily has lower concentrations of crystallisation cores and shifts back to the albedo effect.

In this model the decrease in CO_2 concentration in the atmosphere through photosynthesis regulates temperature and supports the view that temperature lags CO_2 concentration, yet in this natural system, the greenhouse effect is briefly triggered by orbital forcing and support the results of Feulner (2017) indicating that both the carbon drawdown and orbital forcing are driving temperature in the natural system. In this model the CO_2 gets ping-ponged from the terrestrial to the marine system until both are depleted in CO_2. It indicates that, ultimately, under natural circumstances, spreading rate and tectonic events drive climate. From this model it also follows that the industrial use of organic and inorganic carbon sinks, as they have constantly been replenished during earth history through tectonic activity, will lead to CO_2 concentrations as experienced before photosynthesis appeared and concentrations ***far beyond*.**

The aberrant CO_2 and temperature rise in the Anthropocene reflects the tempering of the response system in the lowermost stratosphere because of increasing concentrations of particulate organic carbon and dust by changing land use, lowering of the ground water table by wood cutting, aridification (pyro-cumulonimbi), transport (contrails) and soot emission.