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C. Lawrence. *The Mid-Pleistocene Transition: From Forcing to Pacing of Glaciers.* Preliminary report.

Milankovitch Theory proposes that glaciers are controlled by the amount of solar insolation received at 65N latitude. However, the Mid-Pleistocene Transition and subsequent emergence of 100 kyr glaciations have posed a challenge to this Theory. Allowing the parameters of a model to change through time may be one way to solve this dilemma. The change point algorithm optimizes over not only the parameters of the model but also the timing of the regimes changes. Our analysis has found that the Mid-Pleistocene Transition was a time when the glacial system changed from a forced system to a paced system. We have also found that the best fitting solar insolation curve is not summer 65N as proposed by Milankovitch Theory, but summer 65S, or winter 65N. (Received September 23, 2009)