



Climate Models: Are They Compatible with Geological Constraints on Earth System Processes?

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It has often been noted that the surface climate of the planet has changed continuously over Earth history. This is seen by some to suggest that the ongoing warming due to increasing atmospheric greenhouse gas concentrations should not be viewed as a threat. Yet the rate of change associated with this warming is in fact unprecedented over at least the most recent million years. It is also claimed by some that the models that we employ to predict the extent of future warming are of questionable reliability. The community has in fact invested enormous resources in testing these models by confronting them with geological constraints on past climate regimes. This paper will describe the outcomes of a series of such tests.