Geophysical Research Abstracts, Vol. 7, 01194, 2005
SRef-ID: 1607-7962/gra/EGU05-A-01194

Modelling extreme climate regimes: snowball earth

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The plausibility of the Snowball Earth hypothesis can be explored by testing various climatic aspects of the hypothesis with a numerical climate model. The aspects of the theory tested here are the effect of reduced precipitation, leading to a reduced albedo, the effect of very high levels of carbon dioxide in the atmosphere and the existence of two stable climates forced by the same boundary conditions. All three aspect are important to the theoretical, climatic plausibility of the hypothesis, and hence to the likelihood of the Snowball Earth state having existed in the Neoproterozoic period.