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## **Application of a Global Analysis Method to a Simplified Climate Model**

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With 2 Figures

Received October 20, 1997

Revised April 29, 1998

### **Summary**

In the paper, we construct a three order simplified climate model, undergoing chaotic dynamics. Generalized cell mapping, a global analysis method, is introduced to describe the global long-term behavior of the chaotic climate system, and to predict its global probability evolution. Numerical experiments are carried out for day-to-day prediction and temporal average prediction. Ways to enhance the prediction capability are suggested. The results show that using the global analysis method to combine dynamic frames with statistical description is a promising method for climate prediction.