Geophysical Research Abstracts, Vol. 9, 00978, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-00978

Response of the global coupled climate model CLIMBER-3α to ENSO variability

H. Goelzer, A. Levermann, S. Rahmstorf
Potsdam Institute for Climate Impact Research (Heiko.Goelzer@pik-potsdam.de)

The Earth System Model of Intermediate Complexity (EMIC) CLIMBER-3α has been extended by coupling with the Zebiak-Cane ENSO model (ZC). The background state of the ZC can be given by time-averaged wind and temperature fields of the EMICs tropical Pacific, which may evolve in the course of specific experiments. The influence of the ZC, on the other hand, is implemented by supplying anomalous heat flux to the upper ocean of the EMIC. Thus, the ENSO-related SST variability in the tropical Pacific is mimicked. Here, we focus on the latter, which introduces the ENSO-specific mode of interannual variability to the EMIC. Being able to control ENSO variability in the model, we are able to track down some of the teleconnections to other climate subsystems, such as the Monsoon and North Atlantic deep water formation, which we validate with observational data.