



Coupled modelling of water isotopes

G.A. Schmidt (1), A.N. LeGrande(1), G. Hoffmann(2), D. Thresher(1)

(1) NASA GISS and Center for Climate Systems Research, Columbia University
(gschmidt@giss.nasa.gov; legrande@giss.nasa.gov; thresher@giss.nasa.gov), (2) LSCE/CEA,
Gif sur Yvette, France (hoffmann@lsce.cea.saclay.fr)

We discuss progress in the coupled ocean-atmosphere modelling of stable water isotopes and their sensitivity to changes in climate. We will examine the intrinsic variability seen in long (multi-centennial) control runs as well as the response of the isotope fields to abrupt changes in the thermohaline circulation, and to orbital and greenhouse gas forcing. In all cases we will examine the precipitation, the soil moisture and the deuterium excess and attempt to elucidate how these parameters may best be interpreted in paleo isotope records.