New results from the paleoclimate modeling intercomparison project (PMIP2)

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The Paleoclimate Intercomparison Project is a long-standing initiative endorsed by the World Climate Research Programme (WCRP; JSC/CLIVAR working group on Coupled Model) and the International Geosphere and Biosphere Programme (IGBP; PAGES). The major goals of PMIP are to determine the model's ability to reproduce climate states that are different from those of today and to increase our understanding of climate change. The evaluation of fully-coupled ocean-atmosphere and ocean-atmosphere-vegetation models will be the major focus of the second phase of the PMIP project. Several well documented key time periods in the past are considered, including the mid-Holocene and last glacial maximum that were the focus of PMIP1, the early Holocene, the last glacial inception and several water hosing experiments (see http://www.lsce-cea.fr/pmip2)

The last year has seen lots of activity around the new simulations performed for the mid-Holocene and the last glacial maximum. The presentation will provide a synthesis of these results. The different topics cover analyses of the changes in the interannual and decadal variability, analysis and evaluation of the representation of the ocean circulation, with a particular emphasis on the circulation of the last maximum. These analyses benefit from the availability of new data syntheses for the continent and the ocean. Implication of these results for future climate projection will also be discussed, since most of the model used are the same than the ones used to perform the set of IPCC AR4 climate scenarios.