Geophysical Research Abstracts
Vol. 17, EGU2015-1570, 2015
EGU General Assembly 2015

Sensitivity of transient paleoclimate simulation results to season definition.

Marie-France Loutre, Pierre-Yves Barriat, Michel Crucifix, and Thierry Fichefet

Université catholique de Louvain, Earth and Life Institute, Georges Lemaître Centre for Earth and Climate Ressearch, Louvain-la-Neuve, Belgium (marie-france.loutre@uclouvain.be)

As early as 1997, Joussaume and Braconnot pointed out the sensitivity of paleoclimate simulation results to season definition. Indeed, the length of the seasons varies through time according to changes in climatic precession. Therefore, it is not possible to strictly phase either insolation or climate variable of two different periods. They compared the seasonal cycle of climatic variables at 126 kyr BP according the classical and the angular definition of seasons and identified a robust general behaviour although significant differences appear mostly during autumn.

In this paper we use the same approach, i.e. classical compared to angular definition of the seasons, in the case of transient simulations of the last interglacial (135-115 kyr BP). The purpose of the study is to identify potential differences in the amplitude and the timing of the climatic signal, depending on the definition of the season. In addition to the comparison of model results, the data-model comparison will show whether the definition of seasons can explain large discrepancies between model and data identified in previous studies (Lunt et al., 2012).