



## **Assesment of the teleconnections between the Mediterranean climate and the global climate with a quadruple coupled model.**

B. Lhévédér (1) and L. Li (2)

(1) LMD, UPMC, Paris, France (blh@locean-ipsl.upmc.fr), (2) LMD, UPMC, Paris, France (Li@lmd.jussieu.fr)

A quadruple coupled model has been developed for the Mediterranean region, composed of two global models : the OGCM ORCA2 ( $2^\circ$  resolution) and the AGCM LMDZ\_global, and of two regional models : the Mediterranean sea circulation model NEMO-Med8 ( $1/8^\circ$  resolution) and the ARCM LMDZ\_Med (about 35 km resolution over the Mediterranean Sea).

These four models are interactively coupled together through the OASIS coupler.

Simulations of the present and future climate performed with this quadruple coupled system are used to study the teleconnections between the Mediterranean climate and the global climate.

Moreover, comparison with simulations performed with these four GCMs, in a forced mode (the Mediterranean regional model (NEMO-Med8/LMDZ\_Med) forced by the global model (ORCA2/LMDZ\_global)) highlight the possible feedback of the Mediterranean climate on the global climate.