



An evaluation of the interactive role of the Mediterranean Sea for short-term climate variability of the nearby regions

L. Li

Laboratoire de Meteorologie Dynamique, CNRS/IPSL/UPMC, Paris, France

The Mediterranean Sea is thought to play an interactive role in modulating the climate variability of the nearby regions, through its supply of energy and water vapour to the atmosphere. This issue is investigated and quantified with a regionally-oriented model. LMDZ-Mediterranean is a variable-grid atmospheric general circulation model with zoom over the Mediterranean and coupled to a constant-depth slab model of the Mediterranean Sea. Two sets of simulations are performed by switching on and off the slab-ocean model. The difference between such two simulations reveals the interactive role of the Mediterranean Sea. Diagnostics are mainly done in terms of short-term climate variability which is quite largely influenced by the interactive Mediterranean Sea. Contrast between the two extreme seasons, winter and summer, is also revealed important.