



## **Scale interaction in a regional Mediterranean climate simulation**

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Scale interaction is an important process in determining both the global climate and regional climate. In particular, the Mediterranean region is suspected to have complex interactions among atmospheric circulations at different spatio-temporal scales. This issue, also important for regionally-oriented projections of future climate change, is investigated through the utilization of the model LMDZ-Mediterranean, a global climate model with a zoom over the Mediterranean Sea. LMDZ-Mediterranean is nudged by ERA-40 dataset outside the interested zone. Two series of experiments are performed with only differences in the forcing variables. The first series uses the synoptic variables and the second one climatological variables. Comparison of these two series reveals how large-scale conditions exert their influences on the Mediterranean mean climate and its variability. Seasonal contrast between the two extreme seasons is also revealed important.