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# The role of Mediterranean mesoscale eddies on the climate of the Euro-Mediterranean region

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In this study, two numerical simulations of the 20th Century climate performed with two global GCM are analysed, with the ultimate goal of isolating the impact of oceanic mesoscale features on the climate of the euro-mediterranean region, and its interannual variability.
In the first experiment (L), a T159 atmosphere (equivalent to ∼80 Km horizontal resolution) is coupled to a 2x2-degree global ocean model, with a locally enhanced 0.5-degree resolution over the Mediterranean Sea region. In the second experiment (H), the same T159 atmosphere is coupled to a global ocean model regional high-resolution 1/16-degree (∼7 Km) ocean model for the Mediterranea Sea, which is connected to a low-resolution OGCM for the global ocean (identical to the ocean model used in L) . Thus, in H, as far as the Mediterranean area is concerned, the atmosphere is coupled to an ocean model which resolves mesoscale features (“turbulent” ocean), whereas in L the atmosphere interacts with a more “laminar” oceanic system.
Since these two experiments are identical except for the resolution of the ocean model over the Mediterranean Sea , the systematic comparison of H and L will allow the assessment of the net effects on the climate of the Euro-Mediterranean region from explicitly resolving mesoscale oceanic features in the coupled model.