



Mediterranean Circulation from 1979 to 1993: Energetics of variability

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The Mediterranean circulation is simulated with ocean general circulation model (OGCM) with 1/8 degree horizontal resolution. The OGCM is forced with the ECMWF reanalysis from 1979 to 1993. In our previous works (Demirov and Pinardi, 2002; Demirov and Pinardi 2003) we have studied the variability of the major elements of the MED circulation for this period and their relation to the transition of the Eastern Mediterranean in the 1980s and 1990s (Roether et al., 1996). Our previous analysis of OGCM results showed in particular that the water mass formation and water mass transport during the studied period was strongly influenced by the variability of the surface forcing and its impact on the basin variability at all scales - basin, sub-basin and mesoscale. We extend our previous results towards study of the energy variability at different scales and its connection to the changes in the surface forcing. We study the impact of the processes of energy transfer between the different scales of the MED circulation. The role of these processes on the formation of variability in the MED observed during the 1980s and first half of the 1990s is discussed.