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Climate change in the Euro-Mediterranean region: results from a set of high-resolution CGCM scenario simulations

S. Gualdi (1,2), E. Scoccimarro (1) and A. Navarra (1,2)

(1) Istituto Nazionale di Geofisica e Vulcanologia, (2) Centro Euro-Mediterraneo per i Cambiamenti Climatici

In this study, we discuss the possible future changes in the climate of the Euro-Mediterranean region as a consequence of the global warming. To this aim, a set of IPCC scenario experiments are analyzed. The simulations have been performed with a global coupled model (CGCM) implemented with a relatively high resolution atmospheric component (T106), which allows some detailed analysis of the regional features of the climate changes. Specifically, simulations of the 20th Century and the A1B and A2 IPCC scenarios for the 21st Century are considered. Possible changes in the main features of the seasonal characteristics of the surface climate are examined in detail. Prominent aspects of the Euro-Mediterranean climate variability and its teleconnections with the variability in Tropical and Sub-Tropical regions, such as Africa, Atlantic and Indian Ocean, are also investigated.