Geophysical Research Abstracts
Vol. 14, EGU2012-6016, 2012
EGU General Assembly 2012


# Interannual variability of deep convection in the Gulf of Lions in a Atmosphere-Ocean Regional Climate Model for the Mediterranean area.

B. L'Hévéder (1), L. Li (1), F. Sevault (2), and S. Somot (2)

(1) LMD, UPMC-CNRS, Paris, France (blh@locean-ipsl.upmc.fr), (2) Météo-France, CNRM, Toulouse, France (samuel.somot@meteo.fr)

A fully coupled Atmosphere-Ocean Regional Climate Model (AORCM) for the Mediterranean area is used to investigate the processes responsible for interannual variability of deep convection in the Gulf of Lions. The atmospheric component of the coupled model is LMDz with an horizontal resolution of 30 km, and the oceanic component is NEMOMED8 at about 10 km. The coupled model is driven by the ERA40 re-analysis from 1958 to 2001, giving a mean state of the Western Mediterranean quite realistic. Relations between the different large scale variables conditioning deep convection are investigated : connections between SSH and deep convection, deep convection conditions relatives to buoyancy fluxes and hydrographic preconditioning. Finally, a probability prognostic simple model of the deep convection occurrence is proposed.