A CENSUS OF MEDITERRANEAN EDDIES FROM HIGH RESOLUTION NUMERICAL EXPERIMENTS

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The properties of Mediterranean eddies (size, circulation, energy, ...) are studied using results of the high resolution MED16 model, which has been developed in the context of the MERCATOR project. The numerical model is an extended version of the primitive equation model OPA (LODYC, Paris) with a rigid lid. It uses a 1/16 degree horizontal grid mesh and 43 levels on the vertical. The model initial state was provided by the MODB5 climatology. During about 11 years, the model has been forced in a yearly perpetual mode by daily air-sea surface fluxes from ECMWF analysis (MED16-05 simulation).

Two kind of eddy census are built. The first census is obtained applying the Okubo-Weiss parameter to the velocities derived from the barotropic stream function. Results are compared with analysis of Sea Level Anomalies maps. The second census is built from the full 3D velocity MED16 output applying the Jeong and Hussain criterion. This second census allows to investigate the properties of the deep flow of eddies.