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Comment

Interactive comment on “Modelling of the circulation in the Northwestern Mediterranean Sea with the Princeton Ocean Model” by M. A. Ahumada and A. Cruzado

Anonymous Referee #1

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The paper addresses two themes: the implementation of a high resolution (1/16), nested model for the Northwestern Mediterranean Sea (NWMS) and the description of some of the results referring to a climatological run of the model.

Although I find the paper interesting, I have a difficulty to understand the scope of this work: if it is to describe the circulation of the NWMS on a climatological basis then other models within MFSTEP have covered the topic with exactly the same horizontal resolution (see for example Tonani M., 2003: Studio della predicibilità della circolazione del Mar Mediterraneo. PhD Thesis). On the other hand if the scope of the paper is to describe the nesting effort with the coarser resolution OGCM model then more

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analysis is required along this line (for example testing the nesting scheme behavior with high frequency atmospheric forcing or more frequent OBC updates should be more appropriate).

The implementation of the model and in particular the nesting scheme should be made clearer. The reader should be properly informed how the river runoff is parameterized into the model, what type of climatological forcing is used (and how this forcing was derived), why the authors have adopted the particular nesting procedure, etc.

The authors should compare their results directly with the coarse resolution model results (OGCM) and the observed climatology in order to prove the functionality of their model and the nesting scheme they have adopted. Such an inter-comparison is totally missing in the present manuscript.

Finally I feel that the conclusions derived from this work could be enriched especially if some extra effort is devoted to study the functionality of the nesting procedure between the two models.

Interactive comment on Ocean Sci. Discuss., 3, 1255, 2006.

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