

Interactive comment on “Turbulent dispersion properties from a model simulation of the western Mediterranean” by H. Nefzi et al.

Anonymous Referee #1

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Turbulent dispersion properties from a model simulation of the Western Mediterranean

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Using a high resolution primitive equation model of the western Mediterranean Sea, the authors investigate the turbulent dispersion properties of the flow. A large number of particle pairs are seeded in the flow and followed during two months. Experiments are conducted for several initial separation pairs and at two different depths.

The observed dispersion regimes are carefully compared with theoretical results and proved to be coherent with the three well known regimes of 2D turbulence. The experiments allow to identify the different time scales of these regimes at different depth.

In conclusion, this paper is well written and documented and should be published.

Specific comments.

- Authors should write explicitly that the particles are 2D-advected.

THIS WILL BE CORRECTED IN THE PAPER

- The definition of the “mean square relative velocity” should be given

THIS WILL BE GIVEN IN THE PAPER

WE THANK THE REFEREE FOR HIS COMMENTS