



Particle dispersion in the western Mediterranean basin

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We use the Regional Ocean Modelling System (ROMS) to study the effect of mesoscale coherent structures on the dispersive properties in the western Mediterranean Sea. We analyze the transport properties of an ensemble of Lagrangian particles homogeneously seeded at the surface and at 500 m depth. We show the existence of an intermediate dispersion regime with a surface time scale longer than that at depth. The behavior of the particle dispersion is the superposition of two distinct regimes of two-dimensional turbulence, associated with the hyperbolic and the elliptic domains.