



Point source dispersion of surface drifters in the southern Gulf of Mexico

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The dispersion of surface drifters released from five specific locations in the southern Gulf of Mexico is described. The results provide a statistical estimation over a 7-year period of the spread of a cloud of floats from point sources in the region. It is shown that the drifter dispersion is strongly affected by the main mesoscale circulations features frequently observed in this area. Some of them are the anticyclonic eddies shed by the Loop Current at the eastern side of the Gulf of Mexico, and the semi-permanent cyclonic gyre at the Bay of Campeche. The results are examined further in terms of two dominant and contrasting dispersion scenarios: (i) an intense northward advection of drifters, preferentially along the western margin, and (ii) the retention of drifters in the southernmost part of the Gulf of Mexico.