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Large Lenses of Highly Saline Mediterranean Water

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ABSTRACT

Isolated compact anticyclonic eddies or salt lenses were found in the Canary Basin. Hydrographic surveys of three such lenses show large anomalies of salinity and temperature (\sim 0.8, 2.5°C). They are centered at \sim 1100 m, have a vertical extent of up to 900 m and radii of \sim 50 km. Current meter records indicate anticyclonic velocities up to 29 cm s⁻¹. Fine structure with vertical scales of \sim 20 m and less, possibly due to intrusive decay, appears at the outer edges of the lenses whereas the centers are free of such structure. The probability of finding a salt lens at any station in the Canary Basin is fairly high (\sim 0.08).

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