



Tracking of Mediterranean Water eddies with remote sensing data.

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Mediterranean Water eddies (meddies) represent rotating bodies of modified Mediterranean Water propagating large distances below the main thermocline in the subtropical Atlantic. Though the phenomenon has been discovered quite long ago, its climatic importance is not sufficiently known due to difficulty in detection and tracking of these deep-water features. The methodology to follow the meddies with remote sensing data, developed by the authors, permits to obtain uninterrupted tracks for a number of meddies for long periods of time. The tracks are confirmed by in-situ profiling probes observations. The results suggest that meddies can be relatively securely tracked with altimetry data in dynamically calm regions. The problems arise in the areas of meddy formation, those with intensive surface circulation structures, and steep topographic rises. Ocean Colour and Sea Surface Temperature signatures of meddies are less obvious, but at times quite clear. Re-analysis of several meddy tracks and historical data permitted to create a picture of major meddy pathways in the North-East Atlantic.