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Remote sensing signature of three meddies east of the Mid-Atlantic ridge

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During an oceanographic cruise in the Subtropical NE Atlantic three Mediterranean water eddies (meddies) were discovered. The meddies were derived from in-situ data as positive salinity/temperature anomalies and negative potential vorticity anomalies. All the meddies had a surface signature, sometimes disguised by surface dynamic structures. The strongest meddy-131 could be observed in altimetry, SST and Ocean Colour. The altimetry currents over the meddy-131 had better correlation with deep Mediterranean water layer than with the surface one. The remote sensing signature permitted to trace the major meddy several months backward and forward. Mechanisms for Meddy manifestation at the surface are discussed.