



Tidal currents at the Strait of Gibraltar from intensive shipboard ADCP measurements

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In November 2003, an intensive vessel-mounted ADCP survey was carried out at Tarifa Narrows, in the central part of the Strait of Gibraltar, to investigate the cross-strait structure of the flow. The survey was made during two one-day periods, at different stages of the spring-neap tidal cycle. A 2-D tidal model has been used to assimilate the measurements to a synoptic dataset. The dataset allows a high-spatial-resolution description of the two-dimensional structure of mean and tidal currents as well as both the Atlantic inflow and Mediterranean outflow at that section. Mean and tidal transports have been satisfactorily compared with previous estimates.