

NEAR-SHORE CURRENT OBSERVATIONS IN THE GULF OF CADIZ

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Most studies of the surface circulation of the Gulf of Cadiz have used either remotely sensed sea-surface temperature (SST) or climatological data. However, a considerable effort has recently been made in order to study both its northern (Criado-Aldeanueva *et al.*, 2006; García-Lafuente *et al.*, 2006; Ruiz and Navarro, 2006; etc) and southern portions (Machín *et al.*, 2006) from in situ data. García-Lafuente *et al.* (2006) describe a cyclonic circulation cell between Cape Santa Maria and Guadalquivir River that characterises the spring-summer season. García-Lafuente and Ruiz (2006) hypothesises that this cyclonic cell breaks during winter, giving rise to the characteristic anticyclonic circulation that one would expect according to the North Atlantic Subtropical Gyre eastern boundary current system. On the other hand, the surface circulation in the Gulf of Cadiz is subject to short-term variability following the change in the wind regime from westerlies to easterlies.

Hydrological, currentmeter and meteorological data for the continental shelf of the Gulf of Cadiz, collected between 2001 and 2003, are here analysed. The sampling frequency and duration allow us to study the surface circulation at different temporal scales. The analysis shows that, although the seasonal signal is weaker than the synoptic one, it plays an important role in the shelf circulation. The data show a surface current parallel to the coast that flows eastwards during winter and westwards during summer, confirming the circulation pattern described by García-Lafuente *et al.* (2006). This surface current also shows short-term changes, both in direction and intensity, due to changes in the wind direction.

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