{rokbox title=|(A)Western Mediterranean Sea and main currents characterizing the regional circulation. (B) Station distribution used during Atame-0612 as an example of Tunibal standard grid station planning. :: Figure: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-jms-interannual-variability-balbin-et-al-2014-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-jms-interannual-variability-balbin-et-al-2014.jpg{/rokbox}

R. Balbín, J.L. López-Jurado, M.M. Flexas, **P. Reglero**, P. Vélez-Velchí, C. González-Pola, J.M. Rodríguez, A. García, **F. Alemany** ,
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Interannual variability of the early summer circulation around the Balearic Islands: Driving factors and potential effects on the marine ecosystem
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Abstract: Six summer surveys conducted from 2001 to 2005 and in 2012 by the Spanish Institute of Oceanography (IEO) reveal that the hydrographic early summer scenarios around the Balearic Islands are related to the winter atmospheric forcing in the northwestern Mediterranean Sea. The Balearic Islands (western Mediterranean Sea) lie at the transition between the southern, fresher, newly arrived Atlantic Waters (AWs) and the northern, saltier, resident AW. The meridional position of the salinity driven oceanic density front separating the new from the resident AW is determined by the presence/absence of Western Intermediate Water (WIW) in the Mallorca and Ibiza channels. When WIW is present in the channels, the oceanic density front is found either at the south of the islands, or along the Emile Baudot escarpment. In contrast, when WIW is absent, new AW progresses northwards crossing the Ibiza channel and/or the Mallorca channel. In this later scenario, the oceanic density front is closer to the Balearic Islands. A good correspondence exists between standardized winter air temperature anomaly in the Gulf of Lions and the presence of WIW in the channels. We discuss the use of a regional climatic index based on these parameters to forecast in a first-order approach the position of the oceanic front, as it is expected to have high impact on the regional marine ecosystem.

Keywords: Ocean circulation, Oceanic fronts, Water masses, Western Mediterranean Sea, Balearic Sea, Regional climatic index