



Temporal variability of mass transport across Canary Islands Channels

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The equatorward flowing Canary Current (CC) is the main feature of the circulation in the Canary Islands region. The CC flow perturbation by the Canary Islands originate the Canary Eddy Corridor which is the major pathway for long lived eddies in the subtropical North Atlantic (Sangrà et al., 2009, DSR). Therefore the variability of the CC passing through the Canary Archipelago will have both local and regional importance. Past studies on the CC variability through the Canary Islands point out a clearly seasonal variability (Fraile-Nuez et al, 2010 (JGR); Hernández-Guerra et al, 2002 (DSR)). However those studies were focused on the eastern islands channels missing the variability through the western island channels which are the main source of long lived eddies. In order to fill this gap from November 2012 until September 2013 we conducted trimonthly surveys crossing the whole islands channels using opportunity ships (Naviera Armas Ferries). XBT and XCTD were launched along the cross channels transects. Additionally a closed box circling the Archipelago was performed on October 2013 as part of the cruise RAPROCAN-2013 (IEO) using also XBT and XCTD. Dynamical variables were derived inferring salinity from $S(T,p)$ analytical relationships for the region updated with new XCTD data. High resolution, vertical sections of temperature, potential density, geostrophic velocity and transport were obtained. Our preliminary results suggest that the CC suffer a noticeable acceleration in those islands channels where eddy shedding is more frequent. They also indicate a clearly seasonal variability of the flows passing the islands channels. With this regard we observed significant differences on the obtained seasonal variability with respect the cited past studies on the eastern islands channel (Lanzarote / Fuerteventura - Africa coast). This work was co-funded by Canary Government (TRAMIC project: PROID20100092) and the European Union (FEDER).