

FLUXES IN THE BALEARIC CHANNELS

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Superficial and intermediate water fluxes, through the Balearic channels, have been calculated and studied, in order to contribute to the knowledge of the water masses circulation and mesoscale variability, in two consecutive Mediterranean sub-basins.

A data set from three cruises carried out, in the Balearic channels, during March, May and June 1993, were used to calculate these fluxes. Table I shows preliminary net results.

Superficial northward fluxes close to 0.5 Sv, point out the importance of Modified Atlantic Water (MAW) input in this area. The values imply that under certain circumstances, an important percentage of the MAW output from the Alborán sea, reach the Balearic Islands, possibly transported by processes associated with the Almerian-Oran front instability or by mesoscale processes associated with the Argelian Current.

In the same way, Levantine Intermediate Water fluxes (LIW) show seasonal features in relation with the Ligur-Provençal-Catalan current and the Winter Intermediate Waters are shown to be seasonal.

This flux data set when compared to historical data, shows a high interannual variability.

| | IBIZA CHANNEL | | | MALLORCA CHANNEL | | |
|----------|---------------|--------|--------|------------------|--------|--------|
| | N | S | NET | N | S | NET |
| MARCH 93 | +0.366 | -0.808 | -0.442 | +0.907 | -0.432 | +0.475 |
| MAY 93 | +0.946 | -0.690 | +0.256 | +0.607 | -0.225 | +0.382 |
| JUNE 93 | +0.532 | -0.575 | -0.043 | +0.543 | -0.143 | +0.400 |

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