



Analysis of oceanographic time series from a mooring in the Southern Adriatic Sea (November 2002 –May 2003)

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The analysis of thermohaline properties in a location of the Southern Adriatic Pit is proposed. Data originated from measurements taken with MicroCAT C-T Recorders every half an hour between 1st November 2002 and 8th May 2003 at five levels: 348m, 541m, 744m, 998m and 1101m depth. Salinity, potential temperature and density are computed from conductivity and temperature measurements.

Data have shown the Gaussian distribution, which allowed an easier processing of elimination of outliers. Also low-pass filtering is applied in order to eliminate inertial and tidal oscillations and focus on low-frequency variability of salinity, potential temperature and density. Potential temperature series have shown to be well correlated to each other, except for the one at 348m depth. Salinity series at 541m depth is well correlated with the one at 744m, and with the series at 998m depth. In the same way, salinity and temperature are well correlated at 541m, 744m and 998m depth, while low correlation is found between 348m and 1101m depth.

Water masses are identified from T-S diagram. Levantine Intermediate Water (LIW) is found at 348m and Adriatic Deep Water (ADW) at 1101m. Regarding the temporal variability, in particular for 541m, 744m and 998m, an increase in the salinity and potential temperature have been detected at the beginning of January and March 2003 with a corresponding decreasing in density, most probably due to advection of warmer and higher salinity water in the mooring area.

Mooring data combined with basin-wide surveys and satellite data gives the overall

picture of the hydrographic conditions of the basin, showing a prominent mesoscale activity in early spreading phase. Mesoscale activity is evidenced from surface chlorophyll-a distribution. Currentmeter records suggest vertically coherent variability below the main thermocline as shown from CTD data.