

## ***Interactive comment on “Hydrography in the Mediterranean Sea during a cruise with RV POSEIDON in April 2014” by D. Hainbucher et al.***

**Anonymous Referee #3**

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General comment to the Authors The paper describes the results of the analyses of CTD, underway CTD (UCTD) and ADCP vertical profiles acquired during a 25 days long cruise between Gibraltar and Crete, and in the Ionian sea along Greece and southern Adriatic sea, during April 2014. The Mediterranean transect follows the path of previous cruises in order to study the interannual variability of LIW in the two sub-basins and the investigation of deep waters in the EMed. Interesting the presentation of the different use of the three instruments but a short comparison of the data should be given and results describe mesoscale activity encountered but nothing about what in the aim of the cruise (interannual variability of LIW in the Med and the investigation of deep waters in the EMed) after short comparison with mentioned previous cruises.

Abstract line 5: the following sentence must be re-written “The objectives of the cruise  
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were twofold; longterm variations of the Levantine Intermediate Water (LIW) and the deep water masses of the Eastern Mediterranean Sea were investigated.”

Introduction Line 10 page 4: correct “Deep Water (AdDW) and water of Aegean” in “Deep Water (AdDW) and the water of Aegean” Line 28 page 4: correct the sentence “of the cruise is twofold: adding knowledge” and re-write it in two shorter sentences as now it is quite long Line 1 page 6: I would delete Table 1 and shortly put essential information on used sensors in a sentence. Line 18 page 6: I would delete the sentence “Specifications for the CTD sensors are given in Table 2.” as the Table 2 that do not give any further information that is essential for the paper Line 20 page 6: the two sentences should be re-written as follows “At almost all stations water samples were taken at 12 pre-defined depths along the water column for oxygen analysis and at three of which also for salinity analysis.” Line 2 page 8: I would delete the sentence “Specifications for the UCTD sensors are given in Table 3.”. The author can shortly put essential information on used sensors in a sentence.

Discussion The paragraph quickly describes mesoscale activity measured during the cruise but nothing about its objectives mentioned in the Abstract and in the Introduction. Figure 3 (page 19) is not mentioned in the text but only Figure 2 and 4 where some eddy should be indicated.

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