

1 **Reply to interactive comment given by Anonymous**  
2 **Reviewer #1, Biogeosciences Discuss., 9, C271–C272,**  
3 **2012.**

4  
5 **I. Vilibić<sup>1</sup>, S. Matijević<sup>1</sup>, J. Šepić<sup>1</sup> and G. Kušpilić<sup>1</sup>**

6 [1]{Institute of Oceanography and Fisheries, Split, Croatia }

7 Correspondence to: I. Vilibić (vilibic@izor.hr)

8  
9  
10 We appreciate the comments given by Anonymous Reviewer #1, they helped a lot to improve  
11 the quality of the manuscript. We are going to incorporate relevant changes in the revised  
12 version of the manuscript, as following:

13 *Page 928, lines 16–18. Please, avoid being speculative in the abstract.*

- 14 • We changed the speculative parts and shortened this long sentence.

15 *Page 933, lines 23–24. More details should be provided on the method used to fit the time*  
16 *series to the seasonal cycle (Levenger-Marquard, Gauss – Newton, ...). In addition, you*  
17 *should present either here or in the results section the fitting parameters (amplitude and*  
18 *diphase of the two harmonics) and the % of the total variability of each time series that was*  
19 *explained by the seasonal function.*

- 20 • We add the details on the method, and presented in Section 2 some variance data on  
21 seasonal variability removed by the fitting. However, the purpose of the fitting was  
22 mainly to reduce the variability in the series, by removing the processes not relevant  
23 for the hypothesis which decrease the significance estimates, and not to comment  
24 much or to investigate seasonal cycle. Therefore, we didn't introduce and comment  
25 any of these results to Section 3.

26 *Page 934, lines 18–23. I would suggest using the Apparent Oxygen Utilisation (AOU) rather*  
27 *than the salinity and temperature dependent dissolved oxygen concentration to study the*  
28 *temporal changes in oxygen content.*

1       • We agree, and changed accordingly all figures and the text.

2       *Page 935, lines 24-25. The level of significance of the differences between the 1991-1998 and*  
3       *all-years distributions should be tested statistically and presented in the manuscript.*

4       • It is done, and incorporated in new figure – significant differences are marked by full  
5       circles.

6       *Page 941, summary and conclusions. The last part of this section (from page 942, line 23 on)*  
7       *deals with the implications of the changes produced by the EMT and, therefore, should be*  
8       *part of the discussion, not the conclusions.*

9       • Rewritten and moved to discussion section.

10      *Page 931, line 14. The word “different” is repeated twice. Please, erase one.*

11      • Corrected.

12      *Figure 6. Please, add the acronyms of the water masses.*

13      • Added.