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Comment

# ***Interactive comment on “Picoplankton community structure before, during and after convection event in the offshore waters of the southern Adriatic Sea” by M. Najdek et al.***

**Anonymous Referee #2**

Received and published: 9 January 2014

The manuscript reports on results of depth profiles of picoplankton abundance, production, diversity and metabolic capacities in two stations belonging to the South Adriatic Pit sampled 5 times during a year. This period included an intense winter convection episode in February, what gives the paper a special interest. The paper provides a good data set and it is worth publishing. However, I have some comments, specially concerning the representation of results that should be addressed before publishing.

P17864 -L5. In such an oligotrophic area, 1.7 ml aliquots for the measurements of prokaryotic heterotrophic production were not close to detection limit? -L13. There is no need to specify per liter after bacterial abundance.

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P17686 -L5. This statement, the influence of NadDW as an increase of T and S in May, is difficult to see in figure 2, specially for temperature. Decrease of S and T in March are due to NadDW at 810-850 m, written in the previous sentence, are also difficult to see. Could you find a better representation of the results?

P17868 -L5. This is shown in Fig. 5, not in Fig. 6 and 7.

P17869 L9. Delete of.

P17872 L8. The larger growth of picoeukaryotes was probably stimulated by higher concentration of nitrites. Further explanation and references should be added to support that observation.

P17875 L5. The explanation that the higher bacterial metabolic activity in station P1200 is due to grazing seems too speculative since the authors do not provide any data, so I recommend to delete the sentences from L5 to L10.

Discussion. February and March samplings are very different, also in terms of bacterial abundance and production. However, bacterial composition appears to be very similar in the productive or in the deep layer between both months. A paragraph discussing on that should be included in the discussion.

#### Figures and Tables:

-Citation of figures. Figure is not cited in the text and Figure 3 citation appears before Figure 2.

-Units should appear inside parenthesis and not after a /. This is the case for depth and temperature in fig. 2, and all axes in figures 4, 5, 6 and 7.

-Figure 3. The dates of the satellite images on surface chlorophyll a (24 February and 26 March) are not very close to the dates of sampling in those months: 12 Feb and 12 Mar. It would be more informative for the manuscript if you could choose images closer in time to the sampling dates.

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-Figure 5. It seems hard to believe that SAW and LIW have similar L/T ratios since they have opposite values for Leu (C or B), lower in SAW, and TdR, lower in LIW. I think the authors should check the calculation of the ratio.

-Figure 6 and 7. I recommend to change the axes of the graphs, with the months in X, and with vertical columns. As it is now, it looks like a depth profile.

-Figure 8. The addition of a column with different colours (or black and white) corresponding to PL or DL would help to better visualize the results.

-Figure 9. As far as I know, Biolog Ecoplates do not contain amides but amines, the authors should check and correct if needed. The standard differentiation of Ecoplate substrates into categories includes the categories listed in the paper, but instead of phosphorylated compounds, phenolic compounds. I wonder if the abbreviation PC could correspond to phenolic instead of phosphorylated compounds.

-Quality of the figures should be improved. For example, the text in fig. 3 is very difficult to read. Also fig. 9 has a poor quality.

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Interactive comment on Biogeosciences Discuss., 10, 17859, 2013.

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