

OS-2021-124

Title: *„Influence of cyclonic and anti-cyclonic eddies on plankton biomass, activity and diversity in the southeastern Mediterranean Sea“* by Belkin et al.

General comments

The authors are presented a study about influence of cyclonic and anti-cyclonic eddies on plankton in the southeastern Mediterranean Sea. This work relies upon an extended dataset in two hydrologically different sites in the SEMS deep waters. The presented results are interesting and offers useful background for future investigations of Mediterranean biodiversity and introduction of non-indigenous species as well as in general ecosystem status due to impact of cyclonic and anti-cyclonic eddies on abiotic and biotic factors. Therefore, this manuscript deserve to be published but the ms needs the following correction before it can be recommended for publication.

Detailed comments

Title

According to my opinion better option for title is: *„Influence of cyclonic and anti-cyclonic eddies on plankton in the southeastern Mediterranean Sea“* by Belkin et al.

Remove „PERLE“ from keywords

Abstract

Abstract is too long.

Methods

Please, in Figure 1 present wider area of the east mediterranea (with countries) where study sites are.

Line 195 to 198, miss reference.

The main objection is methodology for zooplankton sampling.

Meso-zooplankton were sampled using vertical WP2 hauls (Ø-57cm, 50-µm mesh. This mesh size and diameter are not appropriate for mesozooplankton (not representative), only for microzooplankton (see some zooplankton methodology). In the plankton rich environment (cyclonic) due to clogging of the pore of mesh of this size only a fraction of the water volume will actually have passed through the net. Also, in this

circumstances, water goes out of the net and many specimens will not be caught in the sample. In addition, diameter of 50- μ m mesh is too small for catch representative samples of mesozooplankton in plankton poor environment (anticyclonic) because they are rare in the oligotrophic conditions. Finally, samples collected only from the upper 300 m in anticyclonic eddies could also be wrong because it is possible that due to downward of water organisms are deeper. As we can see from the figure 8., many groups of zooplankton have not been recorded in the AC eddies, like for example chaetognaths, which is not possible (for my opinion).

So, please, give some explanation (if you maybe can provide any citation) for this method for mesozooplankton or some kind of calculation (approximation).

References

In the reference list miss *Motoda, 1959*. Please check references carefully.

Discussion

From lines 685 to 700 are very similar conclusions like from line 814 till end.

What means $> 100 \mu\text{m}$ samples?